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ABSTRACT

This report provides additional detail on the problems of test and measurement and cost analysis associated with performance contracting programs. The guide, addressed to school board members, administrators, and other educational decisionmakers who may be contemplating a performance contracting program, delineates the questions, issues, and choices these decisionmakers are likely to confront. Appendix A develops six points dealing with the measurement of learning gains. Appendix B explores the conceptual and methodological bases of cost analysis and describes a planning cost model to be used in estimating "comparable replication and incremental costs." Appendix C contains eight illustrative contracts between local educational agencies and learning system contractors. Related documents are ED 050 496-497, ED 056 247-252 and ED 060 391. (Author)

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March 1972

A GUIDE TO EDUCATIONAL PERFORMANCE CONTRACTING Technical Appendix

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and J. Richard Harsh

Prepared for the Department of Health, Education and Welfare

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PREFACE

This Report is the third element of the Rand/HEW study of performance contracting in education. The first was a Report by J. P. Stucker and G. R. Hall, *The Performance Contracting Concept in Education*, The Rand Corporation, R-699/1-HEW, May 1971, which discusses the theory behind performance contracting and how it was applied during the 1970-71 school year. The second element comprises six volumes, which examine eight performance contracting programs in 15 schools:

1. R-900/1-HEW, *Conclusions and Implications*, by P. Carpenter and G. R. Hall
2. R-900/2-HEW, *Norfolk, Virginia*, by P. Carpenter
3. R-900/3-HEW, *Texarkana, Arkansas and Liberty-Eylau, Texas*, by P. Carpenter, A. W. Chalfant, and G. R. Hall
4. R-900/4-HEW, *Gary, Indiana*, by G. R. Hall and M. L. Rapp
5. R-900/5-HEW, *Gilroy, California*, by M. L. Rapp
6. R-900/6-HEW, *Grand Rapids, Michigan*, by G. C. Sumner

The present Report, distilled from Rand's findings in both previously reported and new research, is a Guide addressed to school board members, administrators, and other decisionmakers involved in school district affairs who may be contemplating a performance contracting program. It delineates questions, issues, and choices they are likely to confront.

The Guide is published in two parts. The parent volume, R-955/1-HEW, discusses the planning, operation, and evaluation of performance contracting. The present volume is a Technical Appendix that goes into more detail on problems of test and measurement and of cost analysis associated with performance contracting programs. It also reproduces the contracts involved in eight programs.

SUMMARY

This Technical Appendix to R-955/1-HEW contains a more detailed consideration of the problems of measuring student achievement, and of program and resource analysis.

Appendix A, dealing with the measurement of learning gains, develops six basic points:

- There are obvious limitations to group data. If nationally normed standardized tests are to be the means of measurement, analysis of various types of subgroups within a total heterogeneous school population might assist in minimizing these limitations.
- The duration of performance contracts should be critically examined. The shorter the program, the less the probability that any achievement acquired can be observed.
- A time series of measures would be more desirable than either pre- and post- or post-only measures.
- Criterion-referenced items, if used, (1) should have specified quality criteria, (2) should be used with a comparison population to obtain some evidence of their appropriateness and difficulty, and (3) should in every instance be constructed in pools of items dealing with the same performance objective, so that random selection of a criterion-referenced item for assessment might be drawn from the pool.
- A variety of assessments (including student products, teachers' evaluations of understanding and learning, etc.) should be combined with both nationally normed and criterion-referenced assessments of student achievement.
- If a population serves as its own control, the selected performance objectives and the assessments of those objectives should be pilot tested on a matching comparison population.

Appendix B explores the conceptual and methodological basis of cost analysis, and describes a planning cost model to be used in estimating what are here called *comparable replication cost* and *incremental cost*. The same basic procedure is used in estimating both. Comparable replication costs are essentially derived by using standardized resource costs for all programs and districts. The results are useful for comparing various possible programs and thus identifying the most promising configurations for a particular school district, but they do not reveal what a particular

program would actually cost in that district. For the latter purpose, it is necessary to conduct an incremental cost analysis, which takes into consideration the resources available within the district and the local prices that apply. Appendix B contains a highly detailed example of such an analysis, loosely patterned after a 1970-71 performance contracting program in Grand Rapids, Michigan.

Appendix C contains eight illustrative contracts between local educational agencies (LEAs) and learning system contractors (LSCs). They are reprinted from the six volumes of *Case Studies in Educational Performance Contracting*, The Rand Corporation, R-900-HEW, December 1971 (see Preface).

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Appendix A

PROBLEMS OF MEASURING STUDENT GAIN ¹

Performance contracting has greatly increased the attention paid to the problem of using test results as a measure of change in student learning. There is overwhelming consensus in the professional literature that the measurement of individual pupil-gain scores from standardized achievement tests by simply subtracting the pre-test from the post-test score is inappropriate and inaccurate. Writings by Lord, Stake, Stake and Wardrop, Cronbach and Furby, and Snow emphasize the inappropriateness of such analysis of group test data for individual pupils.²

The paper by Stake and Wardrop provides a particularly useful illustration of the unreliable and fallacious interpretations that might be made by merely subtracting a pre-test grade placement from a post-test grade placement for individual pupils receiving special instruction in a performance contract. This illustration demonstrates the effects of: (1) the reliability of each of two parallel forms, (2) the intercorrelation of scores on two forms, (3) the standard deviation of the test form, (4) the reliability of the difference scores, and (5) the standard error of the obtained differences. Recognition of these characteristics of group measures prompted Lord in 1956 to develop a procedure for computing the "true score" as a substitute for obtained scores in either pre- and post-tests or time series studies of student growth. Cronbach and Furby propose a procedure to estimate a true score, and they suggest that an individual's status is best described by a series of estimated true scores rather than the difference between two status scores.

The possibility of obtaining a reliable indication of the change of individual students' achievement is decreased in those performance contracts that provide

¹ This appendix was prepared by Dr. J. Richard Harsh, Southern California Regional Office, Educational Testing Service.

² F. M. Lord, "Elementary Models for Measuring Change," in Chester W. Harris (ed.), *Problems in Measuring Change*, University of Wisconsin Press, Madison, Wisconsin, 1967. Robert E. Stake, "Testing Hazards in Performance Contracting," *Phi Delta Kappan*, Vol. 52, No. 10, June 1971, pp. 583-589. Stake and Wardrop, "Gain Score Errors in Performance Contracting," paper available from authors, University of Illinois at Urbana-Champaign. L. J. Cronbach and L. Furby, "How We Should Measure 'Change'—Or Should We?," *Psychological Bulletin*, Vol. 74, No. 1, 1970, pp. 68-80. R. Snow, "Gain Scores in Performance Contracting," unpublished paper, Stanford University, Palo Alto, California.

instruction over a relatively short time (three to eight months). As shown by Stake's, Snow's, or Cronbach's illustrations, the statistical characteristics of group measurement indicate the probable and expected variability of a status score from a true score, as frequently (in grade placement terms) representing from 1/2 to 1-1/2 years of grade placement units. Even conservative interpretations suggest that one-fourth to one-third of the individual students might show test performance on the post-test which would be in excess of the elapsed period of time on the grade placement scale merely as an artifact of the expected variability of performance on that scale, rather than because of any change in pupil attainment. Some of the professional papers have illustrated that as much as two-thirds to three-fourths of the population will obtain post-test scores that (when considered in relation to the standard error of the two measures, the intercorrelation of the measures, and the reliability of the differences of the scores) show no indication of a change in performance even though the later score may appear larger than the earlier score.

When the performance contract is concerned with these relatively short time periods, the unreliability of the difference in performance from the beginning to the end of such an instructional period is maximized, certainly on these group measures that are primarily designed to afford an opportunity of observing differences among individuals in groups, but not of providing reliable indices of individuals' change from the beginning to the end of a six- or eight-month period. Some measurement specialists have suggested that this problem can be partially reduced by substantially increasing the time interval and thus affording more probability that the changes reflected by the measure are of sufficient size to generally be larger than the expected error variance or standard error of the difference. Even doubling the time period from six months to one year or eighteen months, there would still be a probability that some students would appear to have made growth, while the change might reflect the variance in successive test performances. Some students may show regression, which also may be attributed to measurement variability. Complete confidence on discrete and valid changes in attainment may not be attributed to all individuals in the total group. As the instructional period is increased, it is probable that the difference between beginning and ending indications of individual pupil status could be viewed with more confidence and have more reliability. This is also related to the question: when is a difference a real and observable difference, in contrast to a difference, while statistically computed, which is not an observable or real difference?

Increasing the duration of a contract or the period of instruction from which pupil achievement is anticipated also suggests the recommendation that a measurement design in time series will probably offer more reliable results and provide greater confidence about the characteristics and status of the pupils from the beginning to the end. In effect, this is arguing that although each measure of individual status contains a standard error of measurement, as a series of these measures are obtained on individuals within a group, the combination of the measurements in a time series design generates a slope of scores from which a more accurate characterization of the student's "true performance" might be derived. Insofar as such a time

series might be spread over two or three years, the probability of having more reliable or accurate indications of the pupils' attainment status is greatly increased.

To avoid some of these described difficulties of individual gain scores, some have suggested the use of group data as a basis of payment for performance contracts. Critics of the use of group data point out that a contractor would be paid for some individuals in the group for whom no progress or even regression might have occurred, since the contractor would be paid for the attainment of the central tendency of the group, which conceals the variability of achievement that might have accrued from instruction or might have accrued whether a particular instruction was present or not. Recognizing the aforementioned criticisms, it is also worthy to note that the standardized measures lend themselves better to group than to individual measurement, and certainly the standard errors of measurement and standard errors of differences of measurement are substantially reduced when group data are being treated. Some of the criticisms of group data seem to assume that only mean or median performance will be considered.

It might be appropriate to think of the subgroups that compose a total heterogeneous student population, and then analyze the data of the various subgroups. This would allow the opportunity to reduce the standard error of measurement attributed to the individual by using subgroup data and also to see the effects of the instructional program on student groups of various subgroup characteristics (low, average, and high) during a period of instruction. In this regard, it might also be possible to have baseline data on previous groups of like age or assignment and to make contrasts between the treated and the preceding populations. This is a further elaboration of Snow's suggestion that, to obviate the problems of computing gain scores, it might be possible to have performance contracts based on terminal objectives, and the payment would be in relation to the number or percentage of students that reach certain terminal objectives at the end of an instructional period. As suggested, to counteract the criticisms of the payment for those students who had already attained such terminal status, but not from the benefits of the instructional intervention, baseline data of preceding or parallel groups might be used as a basis on which such payments were weighted or assigned.

Another substantial issue in the use of nationally normed, standardized tests for performance contracts is the relevance of their contents to the particular instructional program and the performance objectives of learning. Criterion-referenced tests have been recommended as the most desirable solution to this problem. Lennon³ and other knowledgeable test publishers have cautioned the overenthusiastic regarding items in terms of time, cost, and a valid theoretical framework for their construction. Early experience has also indicated that criterion-referenced measurement has received substantial attack, mainly in the vein of the credibility of the instruction being broader than or of greater significance than the specific and unique content of the criterion-referenced item. "Teaching to the test" has recurrently been voiced as an issue of the credibility and validity of the learning accomplished

³ R. T. Lennon, "Accountability and Performance Contracting," paper presented to American Educational Research Association, New York, February 5, 1971.

through the performance contract. As a potential solution to the problem of the criterion-referenced items' quality, the item analysis statistics of many publishers' norm-referenced tests offer some opportunity to observe the impact of an instructional program. If, for example, a nationally normed test provides item data which shows the percentage of pupils in a heterogeneous population who mastered the item at age 9, at 10, and at 11 (or at various specified grades), then such item statistics might be used as baseline data for anticipated terminal performance; and the assessment of the treated population could be evaluated in terms of percentage of students attaining success on specified items that have excellent congruity to the performance objectives of the instructional program.

If unique and newly developed criterion-referenced items are used as the basis of assessing accomplishment of the contract's objectives, then there is an imperative need for determining whether the difficulty of mastery of the content of such items is below, at, or substantially above the entry characteristics of the instructed population. For example, in one performance contract in which criterion-referenced items were used, it was discovered that 75 percent of a comparison population who were to receive no instruction through the performance contract were successful on all the criterion items prior to the year of the performance contract. In this instance, it would be obvious that at entry even the treated population would be substantially successful, and that the contractor was being paid for attainments that had already been achieved by a substantial percentage of the student population.

One of the issues in criterion-referenced test items of significance to learning and to education is that of the acceptance of short-term recall as a demonstration of mastery, versus the use of acquired information or skill in a variety of applications and contexts. Research during the Eight-Year Study in the 30's and the early research by Tyler clearly demonstrated the remarkable disparity between short-term memorization of facts, measures of the recall of these facts, and assessments which demanded evidence of understanding of the content or the application and use of the skill or knowledge in a variety of situations. Current educational research also has some illustrations of this, which are exemplified by the very positive results from the beginning to the end of one year of Head Start and preschool programs. These results suggest the significantly higher achievement attained by children engaged in a special intensive program versus those not receiving such a program. However, some of the follow-up studies of Head Start children reveal that after one or two years the treated group were not significantly different from those who received no such instruction prior to their entry into the regular primary school program. Similar results are available from Title I projects, in which pre- to post-measurement during one year shows these populations to have significantly higher achievement in specific performance outcomes than the comparison population in the same district. At the beginning or the end of the following year, the differences observed in the preceding year are unobservable in subsequent measures; moreover, other assessments and evaluations such as teachers' observations of the students' ability to cope with the next instructional activity also reinforce the notion that some of the measures were apparently reflecting the recall or retention of explicit content or material over a relatively short period. The treated students apparently had

neither acquired nor assimilated the knowledge and skills they could use in a variety of applications in subsequent learning activities.

From the available literature, it appears that the measurement specialists and designers of research and evaluation are in substantial agreement on the many problems of payment for performance contracts involving the existing nationally normed standardized tests; and they are also in agreement that, while criterion-referenced test items may represent far greater congruence to the performance objectives of instruction, there are still too many undeveloped requirements of these measures to afford confidence in their use of interpretation. These observations suggest that at this point in time performance contracts would be well advised to include the following considerations:

- While there are obvious limitations to group data, if nationally normed standardized tests are to be the means of measurement, various types of subgroups within a total heterogeneous school population might be the units of assembly of test information from which observations of the attained level of achievement of a treated pupil population would be derived.

- The duration of performance contracts should be critically examined in relation to the probability that any achievement acquired can be observable and usable achievement, in contrast to small and superficial acquisitions that have neither been assimilated by the student nor understood and applied in a variety of contexts which might represent substantial and significant differences in achievement or learning from the beginning to the end of instruction.

- A time series of measures would be recommended as more desirable than either pre- and post- or post-only measures to describe the status of a student population.

- Criterion-referenced items, if used, (1) should have specified quality criteria, (2) should be used with a comparison population to obtain some evidence of their appropriateness and difficulty, and (3) should in every instance be constructed in pools of items dealing with the same performance objectives, so that random selection of a criterion-referenced item for assessment might be drawn from the pool. This would greatly obviate the present criticism of teaching to the specific, unique, and limited content of a single criterion-referenced item.

- A variety of assessments (including student products, teachers' evaluations of understanding and learning, etc.) should be combined with both nationally normed and criterion-referenced assessments of student achievement.

- If a population serves as its own control, the selected performance objectives and the assessments of those objectives should be pilot tested on a matching comparison population. This would allow some preliminary observations concerning whether acquisition of the performance objectives might be attained through maturation, extracurricular experience, etc., irrespective of the contracted instructional program.

Appendix B

PROGRAM COST ANALYSIS IN EDUCATIONAL PLANNING

INTRODUCTION

Any examination of alternative educational programs must be concerned with their effectiveness and cost. Because student achievement is the salient measure of program effectiveness with performance contracts, a great deal of attention is being given to the problems of setting criteria of achievement and measuring educational outcome. Less attention has been paid to the equally demanding task of estimating and analyzing the cost of educational programs. If the instructional strategy of new programs is to be successfully utilized by educational planners, information about both cost and effectiveness must be available to the decisionmaker.⁴

This appendix explores the conceptual and methodological basis of cost analysis, and develops a planning cost model for estimating program cost for use in evaluating alternative programs and in preimplementation planning for future programs. The model and its supporting methodology provide a consistent basis for estimating the dollar cost of educational programs. The development of the model was undertaken because the current costing state of the art does not provide a comparable basis for evaluating alternatives. The usual practice is to give the cost per student for a program with no indication of what the cost includes.

When the cost per achievement year is used, the problems of measuring both the cost and the effectiveness are severe. *Education Turnkey News* has drawn attention to several aspects of using this ratio for analyzing performance contracts:

Even when accurate costs are obtained, it is difficult to compare them with school costs to see which is less, since school costs are kept and reported differently. The comparisons may reveal nothing more than different figures, especially since the firms may depreciate certain items much more rapidly than schools. . . . It is even more difficult to try to contrast effective-

⁴ On this general subject see Charles Blaschke, "Performance Contracting Costs, Management Reform and John Q. Citizen," *Phi Delta Kappan*, Vol. 53, No. 4, December 1971, pp. 245-247.

ness with cost. If effectiveness is reported in tenths of a year's achievement, which some statisticians feel is cutting it too closely, and that figure is divided into cost data which is part hidden and part hypothetical, what does the public get? Will a school board really base a major decision on curricular changes on such a "cost per unit of achievement" figure?⁵

The ratios of cost per student and of cost per achievement year are widely used, probably because of the false confidence the "number" engenders and the relative ease with which it can be generated. In most instances, one of these ratios masquerades as the sole output of cost-effectiveness analysis, although instances are rare in which it can appropriately be so. Wisely used, such analysis produces several outputs: the aspects of cost, the measures of effectiveness, and the *relationships between the two*.⁶

In estimating the program cost to be used in *comparing programs*, the resources available within a specific district or assets inherited from discontinued programs are not taken into account, and a standard price for common resources, such as teachers, is used. The resulting estimate is identified as the *comparable replication cost*. It is, in essence, a comparable cost that normalizes the cost of programs.

In estimating the program cost to be used in deciding whether a particular program can be implemented in a specific district, however, the analyst must determine the resources available within the district and their local prices. The resulting estimate is the *incremental cost* to the district. This concept and methods for estimating incremental cost will be discussed later in this appendix.

Figure 1 depicts the role of the planning cost model in estimating both the comparable replication cost and the incremental cost. In this process, the first step in estimating either cost is to define the program's objectives, students, and resource requirements. These resource requirements are translated into the type of program cost estimate relevant to the decision to be made. The planning cost model helps insure cost comparability among programs for decisionmaking.

A short discussion of the concepts and techniques of cost analysis underlying the model and techniques to be discussed may provide helpful background; therefore, we present here some of the major elements of the theory behind the analysis to follow.

COST ANALYSIS

The purpose of cost analysis is to determine physical resource requirements, calculate the program dollar cost, and systematically evaluate how changes in the program will alter the resources needed and their cost. The approach is to determine

⁵ Reed Martin and Peter Briggs, *Education Turnkey News*, February-March 1971.

⁶ For a discussion of problems and appropriate uses, see M. B. Carpenter and S. A. Haggart, "Cost-Effectiveness Analysis for Educational Planning," *Educational Technology*, October 1970, pp. 26-30.

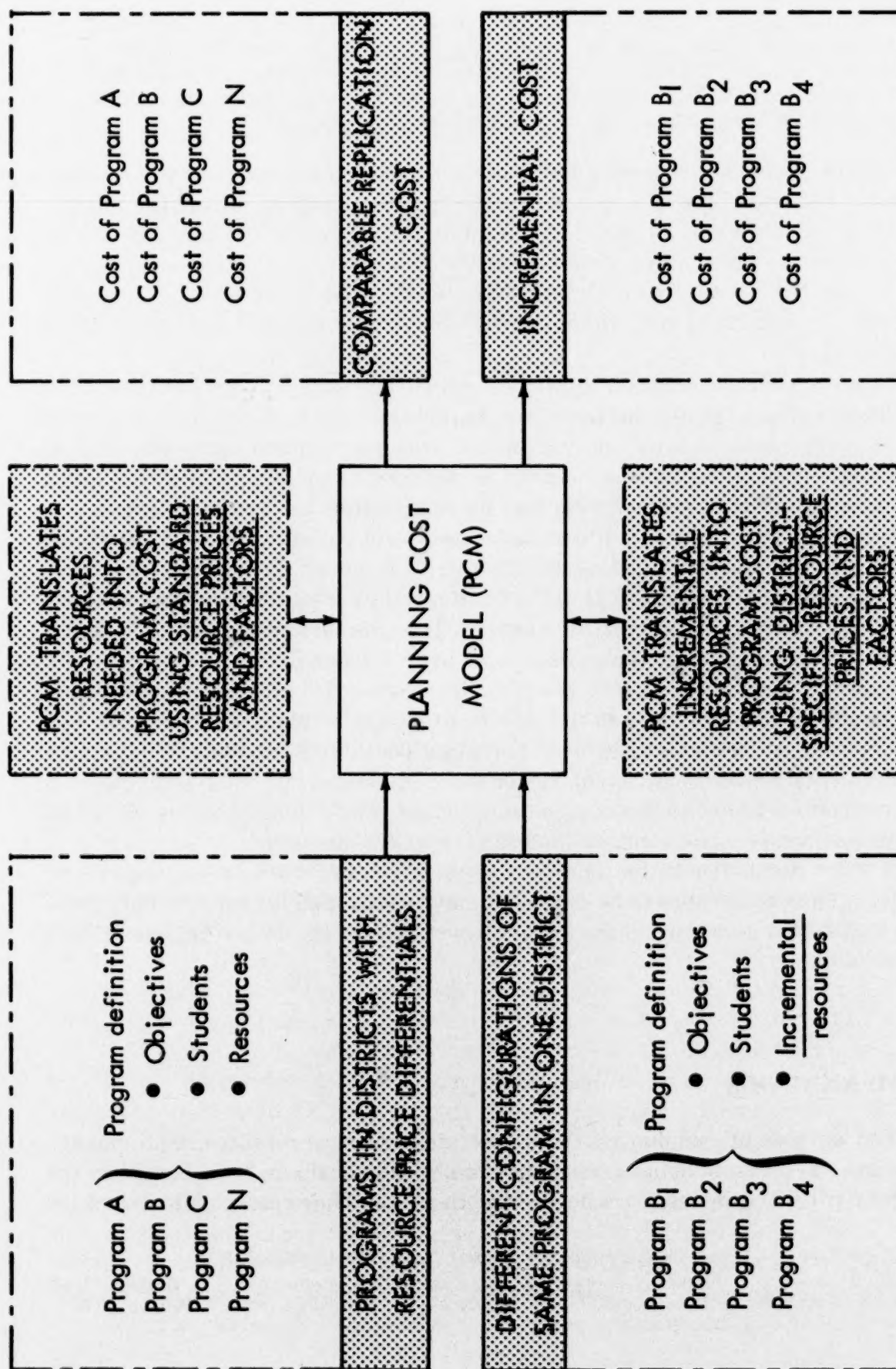


Fig. 1—Process of estimating the comparable replication cost and the incremental cost of programs

the facilities, staff, equipment, materials, and services needed under a performance contract and to translate these resource requirements into estimated program dollar costs.

Definition of the Educational Program

The core of an educational program is an instructional strategy, which embodies both the resources and the way they are used.

The first step is to define the program: its objectives, students, the quality and quantity of the required resources, and the types and magnitude of support activities or services.

Determination of Resource Requirements

Figure 2 lists the categories of data needed for determining resource requirements (Table 7 below is an example of an itemized list). Some of the categories pertain to resources directly. Others are "functional packages," such as training, which are combinations of resource items.

The data on students will also, of course, be used later in evaluating the program. Any socioeconomic data on the district that affect the outcome should also be provided, such as income level, turnover rate, or mobility. The instructional time should be given, along with other information that relates to determining the actual time spent with subgroups of students or individual students. The student-teacher ratio is usually used as a proxy for this, but an effort should be made to refine this piece of information.

In describing the facilities needed, the space requirements, including mobile or portable classrooms, laboratories, and their utilization rates, should be carefully determined. Requirements for nonschool facilities should also be stated. The special needs for electrical outlets, air conditioning, carpeting, and lighting should be identified. Furniture needs are to be specified, identifying any special per-student requirements.

The needed quantities and qualifications of the program staff should be specified, including certificated or certified teachers, special teachers, paraprofessionals, and other personnel. If a staff member is to work less than full time, the percentage of time he is to work should be given. Staff requirements for time beyond the "normal" school day should be stated. This includes, for example, custodial or security services needed to keep the school open after the regular day.

Equipment and materials should be identified as program-related, classroom-related, or student-related. Program-related equipment or material is needed because of the particular traits of a specific program. Classroom-related equipment or material is that which is needed to equip a classroom for use several periods during the day. Student-related equipment or material is that which varies as a function of the number of students in the program. In developing a multiyear cost estimate,

Characteristics of Students

Program scope

Number of students
Class time
Class size
Number of sections

Facilities

Space
Students/classroom/day
Utilization
Furnishings

Staffing

Certified teachers
Special teachers
Paraprofessionals
Other personnel

Equipment

Program-related
Student-related

Materials

Program-related
Student-related

Pre-service training

In-service training

Other support

Incentives

Fig. 2—Format for program and resource information

information about the consumable nature of the materials and about the lifetime of the equipment is needed to plan for replacement.

The time allotted to pre-service and in-service training should be specified, along with the materials or equipment required. It should be noted whether training is to be given during or outside of the staff's regular working hours. If in-service training occupies a substantial part of the individual teacher's time, additional teachers (or substitutes) may be required for the instructional load of the program.

The requirement for program-related services such as evaluation or other management activities should be given. It is preferable if the actual time or the numbers of consultants can be specified. In either case, the purpose is to provide some estimate of the magnitude and cost of these services, so the district can decide whether to buy the services or attempt to develop an in-house capability.

Support from other activities refers to such service functions as transportation. For example, a particular educational program might need bus transportation for field trips.

The resource requirements identified in Fig. 2 are meant to be suggestive only. If other data are available, they should be listed, since the purpose is to define as completely as possible those resources and cost-generating activities needed to carry out the program.

The resource requirements are then translated into the dollar estimates of program cost—either the comparable replication cost or the incremental cost—and are then used as inputs to the planning cost model.

THE PLANNING COST MODEL

The planning cost model is a mechanism for determining, conveniently and consistently, the costs of alternative programs. By design, the model is appropriate for pencil-and-paper operation as well as computer operation.⁷

The model brings together the resources required (facilities, staff, equipment, materials) and relates them to program output in the form of activities. It thereby provides more information for making decisions about the merit of selected changes in the activity structure of the total program. For example, trade-offs between fewer but longer instructional periods and more but shorter periods could be assessed. One can also use the model to examine the cost consequences, for the total program, of changing resource utilization rates (e.g., student-teacher ratio) or resource costs (e.g., teacher salary).

A basic task in constructing this educational model was to define cost categories affected by the performance contract. Those costs of school district operation *not* affected by the existence of the program are not included in the estimated cost of the program. An example will clarify this distinction.

Because the cost to the district of transporting students to and from school will continue whether they are in the special program or not, this cost is not attributed to the special program. If the program calls for field trips or other activities, however, the extra transportation costs are charged to it.

Cost Categories

The items, services, people, and activities and their costs can be brought together in one format: the cost element structure shown in Fig. 3. These cost elements are grouped into two broad categories, acquisition cost and operational cost, a division that adequately encompasses the costs of most programs. The acquisi-

⁷ A planning cost model designed for computer operation is described in M. L. Rapp, M. B. Carpenter, S. A. Haggart, S. H. Landa, and G. C. Sumner, *Project R-3, San Jose, California: Evaluation of Results and Development of a Cost Model*, The Rand Corporation, R-672-SJS, March 1971.

Acquisition Cost	Operational Cost
Design of program ^a	Program direction ^a
Development of materials ^a	Evaluation ^a
Evaluation design ^a	Management support ^a
Program implementation	Salaries
Equipment	Teachers
Program-related	Paraprofessionals
Student-related	Specialists
Materials and supplies	Other
Program-related	In-service training
Student-related	Materials and supplies
Pre-service training	Program-related
Facilities (space)	Student-related
Installation	Equipment
	Replacement
	Maintenance
	Facilities O&M
	Contracted services
	Media services
	Transportation

^aIn an operational program, as opposed to a demonstration program, there might be no program cost associated with these activities.

Fig. 3—Cost element structure for educational programs

tion cost is the one-time cost to acquire a capability. The operational cost is the continuing cost of maintaining a capability over a period of time.

In practice, the acquisition cost is also referred to as initial, investment, or capital cost. It covers the cost of all resources needed to acquire a capability; it should also include the cost of the effort devoted to research, development, or design of program components and alternatives. The cost of designing a new mathematics curriculum, for example, is a development cost. In estimating the *comparable replication* cost, however, some overall development costs might be treated as sunk costs. That is, the first program to use the new curriculum would incur this expense, but subsequent uses would inherit it cost-free. On the other hand, if the curriculum had to be redesigned for a particular program, this would be a development cost for that program.

The operational cost is also referred to as the recurring or continuing cost to maintain the capability. It includes, for example, maintaining equipment and in-service training.

Figure 3 identifies some cost categories that possibly might be incurred for an operational program. They can be characterized as the cost of activities rather than of items. In many instances, the items purchased clearly underlie the cost of activities, but the activity cost itself can be used directly in estimating the program cost. For example, the evaluation cost of a program might be estimated by using a factor

such as cost per student; or the cost per program might be used if the evaluation is done by an outside contractor or evaluator. If appropriate, these would be the factors used to estimate the *operational* cost of evaluation. The *acquisition* cost—the non-recurring cost—for evaluation might be based on the district staff time to design the evaluation or might simply be the cost charged by the outside evaluator. The cost basis for these inputs would be per *program* for acquisition cost and per *student* or *program* for the operational cost.

Cost Basis for Inputs

The cost basis for all inputs for the categories in the cost element structure is shown in Table 1. For each category the cost basis is either per student, per program, per unit, or direct service charge. The first two are self-explanatory. The per unit basis refers to units such as classrooms, resource centers, and language laboratories. The service basis is used for services performed either by the district (such as the operation and maintenance of the facilities) or by an outside source (such as special bussing or cable TV in the classrooms).

In some cases, the cost input basis might be a combination of program and unit (classroom), of student and service, or of program and service. No rigidity is implied. The intent is to provide an understanding of how the model inputs are categorized. At this time, it is only necessary to emphasize that some level of input is required on account of there being a certain number of students, and other levels of input are required because there is a certain number of classrooms or instructional centers. In many cases, there is a *program* cost that is independent of the number of either students or centers. Such a program cost can be treated as both an output and an input, or in the jargon of modeling a "throughput," as illustrated below.

Outputs and Inputs of the Model

A program-related cost can be a direct or indirect output of the model. For program development, for example, the direct output would be the same as the input cost. The cost of pre-service training for teachers would be an indirect output—that is, the cost is calculated within the model. If the model were computerized, the direct output would be called a throughput. The physical descriptors of the program and cost factors, such as number of teachers, number of students, salary cost, cost per mile, space requirements, and the like are the inputs to the model. The objective is to keep the number of inputs to a workable minimum while allowing enough input flexibility to provide useful outputs of the model for evaluation and planning.

The outputs of the model are, in general, the resource and cost information about the specific educational program. The *descriptors of the program are shown right along with the cost output*. The purpose is to provide, in one place, an estimate of the comparable replication cost and a description of what is being bought. As this practice becomes more prevalent, the use of a cost per student to describe an un-

Table 1
THE COST BASIS FOR INPUTS

Category	Cost Basis			
	Student	Program	Unit	Service
<i>Acquisition cost</i>				
Design of program		x		
Development of materials		x		
Evaluation design		x		
Program implementation		x		
Equipment				
Program-related		x	x	
Student-related	x			
Materials				
Program-related		x	x	
Student-related	x			
Pre-service training		x		x
Facilities	x			
Installation			x	
<i>Operational cost</i>				
Program direction		x		
Evaluation	x	x		
Management support		x		
Salaries				
Teachers	x			
Paraprofessionals	x			
Specialists	x	x		
Other	x	x		
In-service training		x		x
Materials and supplies				
Program-related		x	x	
Student-related	x			
Equipment				
Replacement			x	
Maintenance			x	
Facilities O&M				x
Contracted services	x			x
Media services	x			x
Transportation	x			x

known quantity will decrease and the quality of information available to the educational planner will increase.

The output of the model is illustrated in Figs. 4 and 5. Notice the similarity of the format to the cost element structure of Fig. 3. More detailed information for any of the items shown can be provided in supporting reports. For example, the resources and cost underlying the cost per student-hour under Media Services might be of interest for some types of decision. The supporting detail for this would follow the same cost element structure used for estimating the cost of the entire educational program.

The model inputs fall into three broad groups: (1) physical descriptors; (2) the cost of resources and services; and (3) the factors or estimating relationships. To repeat, these inputs describe the students, the educational program, and the resource requirements. Inputs are required for all the changes, or variables, that differentiate one program from another.

Structure of the Model

The model integrates the program description, in terms of resources required, with the process of estimating the program cost. The model's framework for estimat-

<i>Description of Program</i>	
Program:	Objective:
Staffing:	Student Characteristics:
Facilities:	Operational Characteristics:
Equipment:	Instructional time
Materials:	Student grouping
	Location
<i>Acquisition Cost</i>	
Program activities	\$ xxx
Equipment	xx
Facilities	xx
Materials	xx
Total acquisition cost	\$ xxxx
<i>Operational Cost</i>	
Program activities	\$ xxx
Salaries	xxxx
Materials	xx
Supplies	xx
Equipment	xx
Other support	xx
Total operational cost	\$xxxxx

Fig. 4—Summary output of the model

Acquisition Cost

Program Activities:		
Design of Program	\$	xxx
Development of Materials		xxx
Evaluation Design		xxx
Program Implementation		xxxx
Pre-service Training		xxx
Installation		xxx
Total		\$xxxxx
Equipment:		
Program-related	\$	xxx
Student-related		xxx
Total		\$ xxxx
Facilities:		
Student-related	\$	xxx
Total		xxx
Materials:		
Program-related	\$	xx
Student-related		xx
Total		xxx
Total Acquisition Cost		\$xxxxx.

Operational Cost

Program Activities:		
Program Direction	\$	xxx
Evaluation		xxx
Management Support		xx
In-service Training		xx
Facilities O&M		xx
Contracted Services		xx
Media Services		xx
Transportation		xx
Total		\$ xxxx
Salaries:		
Teachers	\$	xxxxx
Specialists		xxx
Paraprofessionals		xxx
Other		xxx
Total		\$ xxxx
Materials:		
Program	\$	xx
Student		xx
Total		\$ xxx
Supplies:		
Program	\$	xx
Student		xx
Total		\$ xx
Equipment:		
Replacement	\$	xx
Maintenance		xx
Total		\$ xx
Other Support:		
Other Support:		xx
Total Operational Cost		\$xxxxx

Fig. 5—Detailed output of program cost estimate

ing acquisition and operational costs is shown in Figs. 6 and 7; Figs. 8 and 9 describe their data requirements. For each cost category there is an estimate of cost on either a student, program, unit, or service basis. In the case of "units," the estimate can be the cost per teacher, the cost of the equipment per classroom or instructional center, or the cost per student of materials consumed. For some cost categories, the estimate can be based on an overall program cost. For example, pre-service training, if done by an outside contractor, might be a total cost for the program. It could also be a cost per teacher.

Under "Materials," it may be necessary to estimate the cost of student-related materials, classroom materials for use by many students, and program materials used by the staff in conducting the program. The same practice is followed for the operational costs in Fig. 7.

Cost Category	\$ per Student	\$ per Program	\$ per Unit	\$ per Service
Design of program		x		
Development of materials		x		
Evaluation design		x		x
Program implementation		x		
Pre-service training		x	\$/teacher	x
Installation		x	\$/equipment	
Equipment	x	x	\$/classroom	
Facilities	x		\$/resource center	
Materials	x	x	\$/resource center	
Other support	x	x	\$/classroom	x

Fig. 6—The planning cost model: acquisition cost

USE OF THE PLANNING COST MODEL

Estimating the Comparable Replication Cost

The use of the model will be illustrated by estimating the comparable replication cost for several different programs. Again, we emphasize that comparable resource prices and salaries have to be used in comparing programs for different districts. A comparison of actual costs would have little meaning, since programs differ not only in their configurations but in teacher salaries and other local prices.

As shown in Fig. 1, the process of estimating the comparable replication cost and the incremental cost begins with a description of the program (see Fig. 2) and its resource requirements. This information is then processed through the model to estimate the cost.

Cost Category	\$ per Student	\$ per Program	\$ per Unit	\$ per Service
Program direction		x		
Evaluation		x		x
Management support		x		x
Facilities O&M			\$/space	
Contracted services				x
Media services				x
Transportation	x	x		
Salaries (including fringe benefits)				
Teachers			\$/teacher	
Specialists			\$/specialist	
Paraprofessionals			\$/aide	
Other			\$/type	
Materials				
Program-related	x	x		
Student-related	x			
Supplies				
Program-related		x		
Student-related	x			
Equipment				
Replacement			\$/unit	
Maintenance			\$/unit	
Other support	x	x	\$/unit	x

Fig. 7—The planning cost model: operational cost

Cost Category	Data Requirements
Design of Program Development of Material Evaluation Design Program Implementation Pre-service Training Installation	Number and type of personnel, time spent, and salary.
Equipment	The equipment list is determined for each student, for each classroom, and, if applicable, for the program. The classroom's equipment is used by several classes. The number of students that can use the equipment is specified.
Facilities	The space required is that over and above the regular program, both for each student and for special resource centers.
Materials	The initial stock of materials is determined for each student, for each classroom, and, if applicable, for the program.

Fig. 8—Program data: acquisition cost categories

Cost Category	Data Requirements
Program Direction Evaluation Management Support	Number and type of personnel, time spent, and salary.
Salaries (with fringe benefits)	All instructional staff and direct support classes of staff are identified by broad category; i.e., general teachers, specialists, and aides are used, rather than a teacher with a specific salary. Fringe benefits are included at the district percentage factor.
Materials and Supplies	The type and quantity of materials used are specified on a student and program basis.
Equipment	The equipment maintenance factor and the replacement factor (based on the estimated lifetime of the equipment).
Facilities O&M Contracted Services Media Services Transportation	Square feet maintained, services purchased, number of hours of audiovisual instruction, and bus trip mileage.

Fig. 9—Program data: operational cost categories

Table 2 summarizes the program and resource data for several illustrative programs. The resource requirements are estimates of what it would take to replicate the instructional strategy of the program. The information under "Other Support" at the bottom of Table 2 provides an example. The replicated program provides eight days of consultant services for the year (an estimate of what might be needed in a future program, not of what was used in past programs). The same is true for Program Evaluation. The presence of this category argues that the district should continue to evaluate the program during operation, even after turnkeying. Cost per student is used here.

The cost information for these illustrative programs is shown in Table 3. These are for estimates of the comparable replication cost. This information is combined with the program and resource information of Table 2 and provides the basic input information for the planning cost model.

Table 4 lists the standard input costs and the factors for use in the planning cost model. The term "standard" applies to a factor used across all programs. In estimating the incremental cost of a district program, resource prices and factors specific to that particular district are used with the planning cost model.

Table 2
PROGRAM RESOURCE REQUIREMENTS

Item	Program A	Program B	Program C	Program D	Program E	Program F
<i>Number of students</i>						
Reading	350	285	491	150	103	250
Math	350	285	535	150	103	—
<i>Instructional time (hr)</i>						
Reading	1	1	1	1.25 ^a	1.25	1
Math	1	1	1	1.25	1.25	—
<i>Facilities</i>						
Space	4 trailers, 2 classrooms, 900/1000	4 trailers, 1 classroom, 1600/1000	2 sgl centers, ^b 1 dbl center, ^b 1 reinforcement	1 classroom, 1 activity area	1 classroom, 1 activity area	2 classrooms
Total square feet	5600	4600	8000	2000	2000	2000
Air-conditioned	x	x	x	x	—	x
Carpeted	x	x	x	x	x	x
Special wiring	x	x	x	x	x	x
Carrels	x	x	x	x	x	—
Tables	x	x	x	x	x	x
<i>Utilization</i>						
Time in use	3(2-hr) shifts	3(2-hr) shifts	7 periods	5 ^a	5	5
Students/instructional unit	20	20	40-S, 65-D	50	50	25
Area/student (sq ft)	50	50	50	40	40	40
<i>Staffing</i>						
Teachers/center or unit	1	1	1	1	1	1
Paraprofessionals/unit	1	1	1	2	3	1
Students/teacher	20	20	40/60	50	50	25
Teachers/program	6	5	4	1	1	2
Paraprofessionals/program	6	5	5	2	3	2
Other direct	—	—	—	—	—	—
<i>Equipment (major items)</i>	Dorsett M-86, teaching machine	EDL AUD-X, controlled readers, Tach-X, Flash-X	Hoffman readers, tape recorders, flash-card readers, Borg-Warner 80 (backup)	Telex, cassette recorders, tape recorders	Telex, cassette recorders, tape recorders, language master	Cassette players, tape recorders,
<i>Materials</i>						
Program-related	Filmstrips, records, Dorsett materials	Filmstrips, discs, EDL materials	Hoffman materials, EDL materials, great variety, Borg-Warner ma- terials	BRL materials, cassettes, variety of other	BRL materials, cassettes, variety of other	Filmstrips, cassettes, paperbacks
Student-related (con- sumables)	x	x	x	x	x	x
<i>Pre-service training</i>						
Teachers	2 weeks	1 week	2 weeks	1 week	1 week	1 week
Paraprofessionals	2 weeks	1 week	—	1 week	1 week	—
Other staff	—	—	—	1 week	—	—
<i>In-service training</i>	5 days	—	2 hr/wk	4 days	3 days	3 days
<i>Other support</i>						
Student diagnostic services	—	—	—	x ^c	x ^c	—
Program evaluation	x	x	x	x	x	x
Consultants	8 days	8 days	8 days	8 days	8 days	8 days

^aTwo 75-minute periods for grades 1-4 with reinforcement in regular classes. One 2.25-hour period for grades 5 and 6.

^bEach center has an instructional area plus an activity area.

^cRemote diagnostic and prescriptive services.

Table 3
PROGRAM COST INFORMATION
(Costs in \$)

Category	Program A	Program B	Program C	Program D	Program E	Program F
<i>Equipment cost</i>						
Total	20,400	15,000	37,000	2,500	2,000	5,000
Cost per instructional area	3,400	3,000	9,250 ^a	2,500	2,000	2,500
Number of instructional areas	6	5	4	1 ^b	1 ^b	2
Students per instructional area	20	20	40/65 ^c	50	50	25
Replacement--10 percent	2,040	1,500	3,700	250	200	500
Maintenance--10/20 percent	4,080	3,000	7,800	250	200	500
<i>Materials cost</i>						
Total	18,000	20,000	45,000	8,000	8,600	7,600
Cost per instructional area	3,000	4,000	11,250 ^a	8,000	8,600	3,800
Number of instructional areas	6	5	4	2	2	2
Consumables (\$/student)	10	10	10	10	10	5
<i>Pre-service training</i> ^d						
Number of staff-days	120	50	90	15	20	20
Cost per day	200	200	200	200	200	200
Total cost	24,000	10,000	18,000	3,000	4,000	4,000
<i>In-service training</i>						
Number of staff-days	30	--	32	12	12	12
Cost per day	200	--	200	200	200	200
Total cost	6,000	--	6,400	2,400	2,400	2,400
<i>Other support</i>						
Student diagnostic services	--	--	--	50 ^f	50 ^f	--
Program evaluation (\$/student)	10	10	10	10	10	10
Consultants (\$100/day)	800	800	800	800	800	800

^aCost per center includes reinforcement areas. Single center cost slightly more than cost shown.

^bOne classroom area plus one activity area.

^cForty students per single center, six y-five per double.

^dIncludes time for paraprofessional training.

^eIncludes salary, materials, and training costs.

^fRemote diagnostic and prescriptive services.

Table 4
STANDARD RESOURCE COSTS AND FACTORS
(Costs in \$)

<i>Facilities</i>	
Remodeling (including carpeting, air-conditioning, etc.)	\$3,000/center
Furnishings (including carrels)	\$2,000/center
<i>Equipment</i>	
Replacement	10%
Maintenance (depends on estimate of reliability based on complexity)	10 or 20%
<i>Materials</i>	
Attrition from use, theft	10%
Consumables	\$10/student
<i>Salaries (including fringe benefits)</i>	
Teachers	\$12,000/year
Paraprofessionals	\$5,000/year
Specialists	\$12,000/year
Program directors	\$15,000/year
General support	\$10,000/year
General administrative	\$12,000/year
Consultants	\$100/day
<i>Pre- and in-service training (including salaries, materials, training)</i>	<i>\$200/day</i>
<i>Program evaluation</i>	<i>\$10/student</i>

The model uses \$12,000 a year as the standard teacher salary. This includes fringe benefits (fixed charges in most district accounting systems). This standard is obviously out of line for, say, a small rural district in the southeastern part of the country, but since it is used for all the programs, disparities in salary cost actually reflect differences in the number of teachers needed. The same point applies to all other standard resource costs and factors.

The comparable replication cost for each of the illustrative programs is given in Table 5. Table 6 aggregates and summarizes those costs along with the salient dimensions of the programs.

Arriving at the operational cost per student per subject as in Table 6 enables a quick comparison of the merits of the programs. The other data can be used similarly, but such rules of thumb must be used with caution; they are no substitute for the results of careful analysis.

Table 5

^aRemote diagnostic and prescriptive services.

Table 6
COMPARABLE REPLICATION COSTS FOR SELECTED PROGRAM DATA

Item	Program A	Program B	Program C	Program D	Program E	Program F
<i>Students and centers</i>						
Number of students	350	285	515	150	103	250
Number of instructional centers	6	5	^{4a}	^{1b}	^{1b}	2
Number of students/inst. center ^c	20	20	40/65 ^d	50	50	25
<i>Costs (in \$)</i>						
Acquisition cost	92,400	70,000	120,000	21,000	22,000	26,600
Operational cost	124,000	98,000	106,000	37,000	38,500	44,000
Operational cost/student	354	344	206	247	373	176
Operational cost/student/subject ^e	177	172	103	124	187	176

^aIn addition to the centers, there is one reinforcement area.

^bThe instructional center is augmented by an activity area of equivalent size.

^cThe instructional center is the basic provisional unit for acquisition cost.

^dForty students per single center, sixty-five per double center.

^eReading and mathematics for all programs except Program E.

For example, the acquisition cost per student could be obtained, it seems, simply by dividing the acquisition cost by the number of students. The problems lies in just what "number" of students to use. If one uses the total number of students in all the instructional periods (or other such time division), the acquisition cost per student reflects an implicit utilization rate for the instructional center. A case in point is Program C in Table 6. In that program, the instructional centers are used seven periods (or hours) each day. In current practice, that is the maximum utilization rate for facilities in any one day. In Program A, on the other hand, if the instructional centers had been used for seven periods instead of six, one less instructional center would have had to be furnished.

If the number of students per instructional center is assumed to be the "best" figure, then the acquisition cost on a per-student basis for each instructional center for each program can be obtained and qualified by stating the utilization rate of the instructional centers. Use of the acquisition cost per student per program is hazardous, however, because the equipment and materials purchased for one year will have more than one year's service if the program is continued.

Estimating the Incremental Cost

The comparable replication cost serves as an "index" cost for use in comparing different programs. It does not reveal what a new program might cost if implemented in a specific school district; for this purpose the incremental cost must be determined. The incremental cost to the district is necessary in deciding whether the district can afford a program similar to a successful program in another district. It is further necessary when deciding on the scope and design of a program that can be accommodated within the resource constraints of the district.

Both incremental cost and comparable replication cost are estimated by essentially the same process. The emphasis is on estimating resource requirements and translating them into cost estimates. In some districts, the unavailability of certain resources might obstruct the implementation of a program even though the district could afford the program in an accounting sense. This possibility makes it all the more important to estimate the physical resources needed.

The remainder of this appendix is devoted to explaining procedures for estimating the incremental cost of a program. By way of introduction, a short discussion of the theory of incremental cost and how it relates to the comparable replication cost concept may be helpful. This subsection attempts such an introduction.

In estimating the incremental resource requirements, the resources available within the district at no additional cost are taken into account. Examples are assets inherited from discontinued programs, physical resources provided cost-free by the community, and volunteer services. After the net incremental resource requirements are determined, district-specific resource prices and cost factors are used to develop the estimated incremental program cost, using the methodology of the planning cost model. Specifically, the standard resource costs and factors shown in Table 4 are changed to district-specific costs.

To illustrate the process and considerations in estimating the incremental cost of a program, the data for Program E (shown in estimating the comparable replication cost) will be used. These data are shown in Tables 7, 8, and 9. For this illustration, it is assumed that information about all the programs, A through F, is available and that Program E is tentatively the preferred program. It is assumed that the district's current salary schedule sets average teacher salary at \$9000 and para-professionals at \$4000, and much equipment and materials are available within the district.

A district computing incremental costs determines the resources available within its inventory and matches this information with the resources required to

Table 7

PROGRAM AND RESOURCE INFORMATION FOR PROGRAM E, AN ELEMENTARY
LEVEL READING AND MATHEMATICS PROGRAM

<i>Characteristics of students</i>	Grades 2-4; Title I; low socioeconomic status
<i>Program scope</i>	
Class time	1.25 hours reading; 1.25 hours math
Number of students	103
Students/instructional area	50±
Number of sections	2
Utilization	5 hours per day
<i>Facilities</i>	
Space	2000 sq ft; 1 instructional area; 1 activity area
Furnishings	6 carrels; carpeting; tables and chairs
<i>Staffing</i>	
Certified teachers	1 per instructional area
Special teachers	None
Paraprofessionals	2 per instructional area; 1 per activity area
<i>Equipment</i> ^a	Telex (remote diagnostic); tape recorders; cassette players; headsets
<i>Materials</i>	Books; games; incentives
<i>Pre-service training</i>	5 days (formal)
<i>In-service training</i>	3 days (formal)
<i>Other support</i>	Remote diagnostic-prescriptive services

^aQuantity and quality of items would be specified in supporting lists.

Table 8

COST INFORMATION FOR PROGRAM E
(Costs in \$)

<i>Facilities cost</i>	
Total program cost	7,500 ^a
Cost per instructional area ^a	5,000
<i>Equipment cost</i>	
Total	2,000
Cost per instructional area ^a	2,000
Number of instructional areas	1 ^a
Students per instructional area	50
Replacement factor 10%	200
Maintenance factor 10%	200
<i>Materials cost</i>	
Total	8,600
Cost per instructional area	8,600
Number of instructional areas	1 ^a
Consumables (\$ per student)	10
<i>Pre-service training</i>	
Number of staff-days ^b	20
Cost per day ^c	200
Total cost	4,000
<i>In-service training</i>	
Number of staff-days	12
Cost per day	200
Total cost	2,400
<i>Other support</i>	
Student diagnostic services	50 ^d
Program evaluation (\$ per student) ...	10
Consultants (\$100 per day)	800

^aOne instructional plus one activity area.

^bIncludes time for paraprofessional staff.

^cIncludes salary, materials, and training costs.

^dContracted diagnostic and prescriptive services.

Table 9
COMPARABLE REPLICATION COST FOR PROGRAM E
(Costs in \$)

<i>Acquisition cost</i>	
Facilities (remodel/furnish)	
Total program cost	7,500
(Cost per instructional area)	(3,750)
Equipment	
Total program cost	2,000
(Cost per instructional area)	(2,000)
Materials	
Total program cost	8,600
(Cost per instructional area)	(8,600)
Pre-service training	<u>4,000</u>
Total acquisition cost	22,100
<i>Operational cost</i>	
Salaries (including fringe benefits)	
Teachers (\$12,000/year)	12,000
Paraprofessionals (\$5,000/year)	15,000
Other (variable)	—
Materials	
Program-related (10%)	860
Consumables (student-related)	1,030
Equipment	
Replacement (10%)	200
Maintenance (10%)	200
In-service training	2,400
Other support	
Student diagnostic services ^a	5,000
Program evaluation	1,000
Consultants	<u>800</u>
Total operational cost	38,490

^aDiagnostic and prescriptive services by contracted services.

implement and operate the program. The resulting resource requirements are translated by means of the planning cost model into an estimate of incremental cost, using district-specific resource prices and factors.

The data needed and the results of the incremental cost analysis for the various configurations of Program E are presented in the same formats as Tables 7, 8, and 9. As an illustration, the incremental cost for two program configurations (160 students and 200 students) is shown in Table 10. The assumptions, incremental resource requirements, and district-specific resource prices supporting the cost estimates would be displayed, *in practice*, in the formats of Tables 7 and 8. In this

illustration, most of the information can be identified in Table 10. Briefly, the district has in inventory about 50 percent of the required equipment for a program of 100 students. Adequately remodeled space is available for one instructional area and one activity area; but two instructional areas and activity areas are needed for 160 students. Only carrels have to be purchased in order to furnish as many as four centers. For one configuration, the district looks at the cost impact of developing an in-house capability for the diagnostic-prescriptive services that are provided to the other configurations on a contracted basis. This leads to an increase in the cost of pre-service training and the additional operational cost for staff members to provide this program-related service.

The resulting program cost analysis provides the information the district needs in deciding whether to implement the program and, if so, what configuration it can afford.

Table 10
INCREMENTAL COST ESTIMATES FOR THREE CONFIGURATIONS OF PROGRAM E
(Costs in \$)

Program Cost Category	E ₁ (160 students)	E ₂ (200 students)	E ₃ (160 students)
Acquisition Cost			
Facilities (remodel/furnish) (1 instructional and 1 activity area have to be remodeled)	3,500	3,500	3,500
Equipment (unit cost/instructional area for 40 students is \$2,000)	3,000	3,800	3,000
Materials (unit cost/instructional area for 40 students is \$6,500)	13,000	17,200	13,000
Pre-service training (5 days/staff member and training of 40 days for diagnostic services in E ₃)	<u>4,000</u>	<u>8,000</u>	<u>12,000</u>
Total acquisition cost	23,500	32,500	31,500
Operational Cost			
Salaries			
Teachers (at \$9,000)	18,000	18,000	18,000
Paraprofessionals (at \$4,000)	8,000	24,000	8,000
Other (at \$5,000, one-third time)	--	--	--
Materials			
Program-related	1,300	1,720	1,300
Consumables	1,600	2,000	1,600
Equipment			
Replacement	400	500	400
Maintenance	400	500	400
In-service training	3,200	6,400	3,200
Other support			
Student diagnostic services	8,000	10,000	--
Program evaluation	1,600	2,000	3,200
Consultants	<u>800</u>	<u>800</u>	<u>800</u>
Total operational cost	43,300	65,920	41,900

Two points should be made clear. First, the cost estimates developed above are *planning* cost estimates. Much greater detail and accuracy are required to meet the needs of planning for actual implementation. Second, analysis of the dollar-cost alone does not provide adequate information for educational decisions. For these reasons, it may be helpful to the reader to examine the detailed example below of the type of analysis needed for planning the implementation of a program in a specific district.

An Example of Incremental Cost Analysis

At the expense of some redundancy, then, the following pages present incremental resource analysis in seven steps, briefly described and illustrated with some hypothetical figures for a candidate program:⁸

1. Summarize the program's resource requirements
2. Derive resource factors
3. Describe the scope of the planned implementation
4. Project resource needs from Steps 1 and 2
5. Delete resources to be supplied by contractor or to be otherwise available without cost
6. Summarize the impacts on resource inventories and personnel
7. Display program costs

Using data provided by the example, a worksheet has been prepared to illustrate each of these steps.

Summary of Candidate Program. The first task is to systematically categorize the identifiable resources required for the program, excluding, however, the resources required for general building maintenance, heating, district overhead, regular pupil transportation, and like expenditures that would be required for any program. Program-specific resources can be divided into seven functional categories:

- Staff
- Facilities
- Equipment
- Furnishings
- Instructional materials
- Training
- Direct program support

Staff includes teachers, aides, secretaries, and on-site managers or directors. All personnel with regular duties in the candidate program are included, whether paid

⁸ The hypothetical figures are roughly based on the Combined Motivation Education System (CMES) program in Grand Rapids. See G. C. Sumner, *Case Studies in Educational Performance Contracting: 6. Grand Rapids, Michigan*, The Rand Corporation, R-900/6-HEW, December 1971.

by the district or by the contractor. This includes any district personnel who are assigned by the district to monitor or supervise the program, but excludes consultants and training specialists who serve the program only periodically.

Facilities include capital expenditures, physical space such as classrooms and offices, and remodeling costs. Items with less than ten-year serviceable lifetimes are excluded.

Equipment includes instructional hardware items.

Furnishings include all furniture and all noninstructional equipment that are removable (such as air conditioners) or that have serviceable lifetime less than ten years (such as carpeting).

Instructional materials can be consumable (such as workbooks) or nonconsumable (such as filmstrips), and may be independent (such as textbooks) or hardware-related (such as cassette tapes).

Training includes pre-service and in-service training.

Direct program support includes management support, instructional consultation, and other costs incurred at the contractor's home office. A Program Summary is provided in Table 11.

Derived Resource Factors. Using the Program Summary as a guide, the next task is to express each resource used in the candidate program as a factor of whatever program characteristic is most closely related to the need for that resource. Consumable materials will ordinarily be expressed on a per-student basis; most equipment will be on a student-per-session basis. Some resources may be related to other resources. For example, the number of paraprofessionals may best be related to the number of classrooms, which, in turn, depends on the number of students, the number of sessions per day, and the class size.

A unit cost for each resource item should be estimated, as well as a yearly replacement factor for those items that are consumable or are vulnerable to wear and tear.

Table 12 lists the unit costs, resource factors, and replacement factors for the example. The replacement factors are multiplicative. For example, if the replacement factor is 0.2, a combined factor can be obtained by multiplying the resource factor by 1.2.

Description of Planned Implementation of Program. The scope of the planned program must be described in terms of those program characteristics that generate needs for resources. The most important is the number of students. Also important are the length of time each student will need in the program classroom, the number of students per session, and the number of sessions per day. The age groups of the participants should be included, and it should be noted whether the organization of the candidate program differs significantly from the district's planned implementation, because these features can affect costs. Assume that the intent is to implement a program with the following characteristics:

Table 11

CANDIDATE PROGRAM SUMMARY

Characteristics of students Grades 6-9; remedial program

Program scope

Number of students (as of midyear) 491, reading; 535, math
 Class time 45 minutes per day each, reading and math
 Class size 35-40 in Single Center (SC) (40 optimum);
 60-65 in Combined Center (CC) (65 optimum)
 Number of sessions^a 14 each subject (7-period day)

Facilities

Space 4 centers: 1 CC for reading and math^b;
 1 SC for reading and 1 SC for math; each
 center has an instructional and an AMS
 (achievement motivation) area; 1 reinforcement
 room; total occupies space of 7 former
 classrooms (walls were changed)
 Students/classroom Number of enrollments/number of classrooms =
 (491 + 535)/7 = 147
 Furnishings Table space for carrels; carpeting; air-
 conditioning; 1 carrel per student per
 section (approximately 125 total); chairs

Staffing

Certified teachers 1 per center (i.e., 1 per SC, 2 per CC)
 Special teachers 0
 Paraprofessionals Full-time: 1 per center, 1 for reinforcement
 room, 1 substitute
 Other personnel 1 full-time director, 1 full-time secretary

Equipment Reading: 40 Hoffman reading machines, 25
 tape recorders/center (50 total); math: 40
 tape recorders/center (80 total), 40 math
 flash-card readers (Electronic Futures);
 15 Borg-Warner System 80 for reading and math

Materials (10% consumable)

Reading 2 sets EPL tapes/center; 2 sets Hoffman ma-
 terials (levels B to G)/center; workbooks
 Math Math minisystem (tapes); workbooks
 Reading and math 2 sets Borg-Warner materials (levels 1-8)/
 reading and math center (i.e., 4 complete
 sets); 1 notebook/student for compiling
 materials

Pre-service training 1 week on AMS in-depth training, 1 week going
 through materials

In-service training About 2 hours a week

Other support See requirements under "Staffing"; Management
 Support Group services

^aThe number of times the program is replicated with different groups of children.
 For example, the reading centers provide each child with reading instruction in mod-
 ules that are the same length as classroom periods; since the centers operate 7 periods
 per day, each center accommodates 7 sessions.

^bThe combined center will be regarded as 2 centers, 1 in reading and 1 in math.

Table 12
DERIVED RESOURCE FACTORS

Item Description	Unit Cost (\$)	Resource Utilization Factor ^a	Replacement Factor ^a
<i>Facilities</i>			
Learning centers	--	.025 centers ^b (25 ft by 40 ft) per instructional unit ^c /sessions per day (round up if above 0.1, or adjust center size)	NA
AMS areas	--	.025 per instructional unit/sessions per day (in learning center if there is space)	NA
Reinforcement Event (RE) room	--	1 per school	NA
Office-storage room	--	1 per school	NA
Remodeling	--	Changing walls, installing partitions as required	NA
<i>Staff</i>			
Teachers	10,500	7-hour day/6-hour availability = 7/6 teachers per center ^d	NA
Aides	3,000	1 per center; 1 per RE room; others as needed	NA
Teacher substitutes	10,500	.03 per teacher (district planning factor)	NA
<i>Administration, with performance contract</i>			
Director	19,000	1 per school	NA
On-site monitor	16,000	1/2 per school	
Secretary	6,000	1 per school	
<i>Administration, without performance contract</i>			
Director	16,000	1/2 per school	NA
Secretary	6,000	1/2 per school	
<i>Fringe benefits</i>	--	16% of salaries	NA
<i>Furnishings</i>			
Carrel furniture, (table, chair, side panel, electrical outlet)	75	.84 sets per instructional unit/sessions per day ^e	0.1
AMS furniture (10 chairs, 1 table)	200	1 set per AMS area	0.1
RE furniture (6 chairs, 3 tables)	200	1 set per RE room	0.2
Office furniture (swivel chair, desk, 8 file cabinets, storage cabinet)	800	1 set per office	NA
Other furniture (2 chairs, 2 tables, 3 bookcases)	250	1 set per center	0.1
Air-conditioning units	600 ^f	1 per room (2 for combined center)	8-yr life
Carpeting	6.5/yd	All floors except office	5-yr life

Table 12--continued

Item Description	Unit Cost (\$)	Resource Utilization Factor ^a	Replacement Factor ^a
<i>Equipment</i>			
Hoffman reading machines	400	$\frac{40 \text{ reading machines}}{(490 \text{ reading students})/(7 \text{ sessions per day})}$ = 0.57 machines per reading student per sessions per day	0.2
Tape recorders, reading	25	$\frac{50 \text{ recorders}}{(490 \text{ reading students})/(7 \text{ sessions per day})}$ = 0.71 recorders per reading student per sessions per day	0.5
Tape recorders, math	25	$\frac{80 \text{ recorders}}{(540 \text{ math students})/(7 \text{ sessions per day})}$ = 1.04 recorders per math student per sessions per day	0.5
Flash-card readers	250	$\frac{40 \text{ readers}}{(540 \text{ math students})/(7 \text{ sessions per day})}$ = 0.55 readers per math student per sessions per day	0.1
Borg-Warner System 80	500	$\frac{15 \text{ machines}}{(1,030 \text{ instructional units})/(7 \text{ sessions/day})}$ = 0.11 machines per instructional unit per sessions per day	0.1
RE equipment (record player, etc.)	300	1 set per RE room	0.8
Earphones	7	$\frac{45 \text{ earphones}}{(1,030 \text{ instructional units})/(7 \text{ sessions/day})}$ = 0.32 earphones per instructional unit per sessions per day	0.2
<i>Materials</i>			
EPL tape sets (reading)	600	2 per reading center (RC)	0.4
Other tape sets (reading)	600	1 per RC	0.4
Hoffman materials (reading sets)	3,500	2 per RC	0.5
Reading software materials	1,000	1 set per 500 reading students	0.8
Math minisystem and flash-card materials	2,500	2 sets per math center (MC)	0.4
Other tape sets (math)	600	1 set per MC	0.4
Math software materials	2,000	1 set per 500 math students	0.8
Borg-Warner materials	2,300	2 sets accommodate 1 RC and 1 MC ⁸	0.5
RE supplies (games, etc.)	100	1 set per RE room	0.8
Student notebooks	0.5	1 per pupil (including AMS only)	NA
Diagnostic and prescriptive materials	1,000	1 set per AMS area	NA
Office supplies and expense	1,600	1 per 1,000 instructional units	NA

Table 12--continued

Item Description	Unit Cost (\$)	Resource Utilization Factor	Replacement Factor ^a
<i>Start-up training and consultation (teachers and Program Managers)</i>	6,000	For district	NA
<i>Management support</i>	--	Varies widely	NA
<i>Staff expense</i>	1,200	For district (4-8 learning centers)	NA
<i>In-service training, consultation and contractor management expense</i>	7,500	For district (4-8 learning centers)	NA
<i>Overhead and other charges</i>	--	30% of contractor costs	NA

^aThe factors represent the author's judgment of appropriateness for the respective resource categories; in several cases, they do not reflect the actual resource utilization of the Grand Rapids program.

^bAssumes 40 students per center per session, from Table 11.

^cFor example, if a student receives both reading and math instruction in the program, he is enrolled for two units.

^dThis formula provides for both teacher supervision of each center at all times and a free preparation hour for teachers. The implication is that in most applications one teacher should be assigned to the program on a part-time basis. (The Grand Rapids program did not provide completely free preparation time.)

^eAt any one time, 80% of the students are actually receiving instruction. The remainder are in AMS or in the reinforcement room. To provide a margin for contingencies we have estimated that 0.84 sets of carrel furniture should be provided per instructional unit.

^fInstallation costs vary widely, depending on the amount of rewiring necessary to accommodate the heavier load.

^gEach Borg-Warner set contains materials for reading and math. If the learning centers accommodate from 20 to 45 students per session, two Borg-Warner sets will be recommended for each pair of centers (one reading and one math) in order to minimize waiting time for students using the materials.

1. An inner-city school, grades 6-9
2. Seven classroom periods per day
3. Classroom size is 25 by 35 ft
4. Expect to turnkey program after one year
5. Expect to decrease program scope in third year
6. Serve lower achievers, scholastically

7.	Year	Number of Participants	Grades	Instructional Units ⁹
	1	600	6-9	1200
	2	600	6-9	1200
	3	300	6-7	0600

⁹ Evenly divided between reading and math.

8. Basis of interyear comparisons to be reading and math instruction for 600 students

Since the number of students in the program decreases in the third year, the district will need to designate a common basis for interyear comparisons. For simplicity, this example will use the maximum number of students served during any one of the three years. Accordingly, the final worksheet will estimate the out-of-pocket costs of providing reading and math instruction for 600 students in grades 6 to 9, even though in the last year some of those costs will be for students in regular classrooms. Looking at it another way, the planning is for 600 students for three years; in the third year, half of those students are to receive regular instruction.

Calculation of Requirements for Planned Program. The next step is to project resource needs by applying the factors of Table 12 to the proposed program. This is done in Tables 13 and 14. Except for items that could conceivably be purchased in fractional quantities, the results have been rounded to integers. The criterion for rounding was reasonableness in view of program needs. For example, some items were rounded upward even if the fractional part exceeded only one-tenth.

Table 13

RESOURCE REQUIREMENTS: FACILITIES

Item	Year 1	Year 2	Year 3
Learning centers ^a	2 reading, 25 x 35 ft 2 math, 25 x 35 ft 1 combined, 25 x 35 ft	same same same	1 reading, 25 x 40 ft 1 math, 25 x 40 ft
AMS room	1 area in each center	same	1, 25 x 25 ft, 3 compartments
RE room	1, 25 x 25 ft	1	1
Office and storage	1, 10 x 25 ft	1	1
No. classroom spaces	6	6	4
Remodeling	partitions in centers	--	tear down, replace two walls

^aThe derivations of these configurations are described in the text.

The configuration of facilities was determined so as to minimize major remodeling and maximize utilization of staff. The number of students in the planned program is not an even multiple of the 40 students per session premised in Table 12 nor are classroom dimensions the same. For these reasons, the facilities planning factors were used only as a rough guide. Strict application of the factors for the first year obtains:

Table 14

RESOURCE REQUIREMENTS: STAFF

Item	Year 1	Year 2	Year 3
Teachers			
Regular	5	5	2
Floater	1	1	--
Sub	0.18	0.18	0.09
AMS	--	--	1
Aides			
Instructional	5	5	2
RE	1	1	0.09
Director	1	1	1/2
Secretary	1	1/2	1/2
On-site monitor (asst principal)	1/2	--	--
Fringe benefits ^a			

^aSee Table 17.

$$.025 \left(\frac{600}{7} \right) = 2.2 \text{ reading centers}$$

$$.025 \left(\frac{600}{7} \right) = 2.2 \text{ math centers,}$$

where each center is 25 by 40 ft and accommodates 40 students per session. Since the fractional parts of these results (that is, 0.2 reading centers and 0.2 math centers) are too small to form an efficient combined center, and since the classrooms available for the planned implementation are only 25 by 35 ft, it seems in the interest of efficiency to adjust the above results as follows:

- 2 reading centers, each accommodating 35 students per session, 25 by 35 ft.
- 2 math centers, each accommodating 35 students per session, 25 by 35 ft.
- 1 combined center, about 30 students per session (15 in reading and 15 in math), 25 by 35 ft.

This arrangement groups students more equally and eliminates the need for moving classroom walls.

Since only half as many students are involved in the third year and thereafter, Table 13 suggests that three of the learning centers be remodeled to provide one reading center and one math center, each 25 by 40 ft and accommodating 44 students per session. The remaining 25 by 25 ft space would provide a separate space for AMS sessions so that the learning centers would be less crowded.

For the Facilities and Staff categories, Tables 13 and 14 state the quantities required for each of the three years. For the other categories (Table 15) the notions

of lifetime and replacement are applicable. Accordingly, for the first year there is a column listing resource requirements (i.e., the level of resources that must be maintained to operate the program) and a column that lists the resources that must be made available as replacement items during the school year; in some cases, the replacement numbers represent maintenance allowances. For each of the years 2 and 3, a third column lists the changes in resource requirements over the previous years.

The sum of both first-year columns represents the resources that must be obtained for that year. For the second and third years, the appropriate columns are those labeled "Increase Over Preceding Year" and "Replacement."

Since the incremental and replacement concepts are not applicable for training and consultation expenses, they are omitted.

Resources to be Acquired. Having arrived at the schedule of resources that must be made available each year, the next step is to subtract those that will be supplied by the contractor, inherited from the regular program, or made available from district inventories. This is done in Tables 16-19. Resource requirements for the regular program are included so that base-year nonprogram costs can be obtained for comparison.

In general, the scheme of Tables 16-19 is first to itemize resource requirements and costs for regular instruction for the same program scope as that of the proposed innovative program (i.e., 600 students); this is called the base year. Then, for the first year of the program, the successive columns itemize (1) the resource needs from Tables 13-15 (Resource Requirement plus Replacement, or Increase plus Replacement), (2) the contractor-supplied items, (3) the district-supplied items, (4) availability of district-supplied items from inventories, (5) resources that must be newly acquired, (6) total costs of resources based on unit costs from Table 12 (Net Cost), and (7) the quantities of regular program resources that are released because of the innovative program. The second and third years are treated similarly, except that the "Contractor-Supplied" and "District-Supplied" columns are omitted; since we are assuming that turnkey begins in the second year, all items are district-supplied. Note that in year 3, when the number of students in the implemented program is smaller than the 600-student base, regular program costs for math and reading for the remaining students are included to enable interyear comparisons. Resources that are freed during the third year because of changes in scope are noted in the appropriate "Released" columns.

Incremental Resource and Staffing Requirements. Table 20 summarizes changes in district inventories that would result from the release of items to inventory or withdrawal of items from inventory by the program. Data in the "Additions" and "Reductions" columns were respectively taken from the "Released" (by program) and "Available" (from inventory) columns of Tables 16-18. Table 20 would provide useful input to the district's inventory management system.

Table 21 summarizes personnel changes that result from the program. Negative balances indicate the need for hiring new staff or transferring staff in from other

Table 15

**RESOURCE REQUIREMENTS: FURNISHINGS, EQUIPMENT,
MATERIALS, AND OTHER EXPENSES**

Item	Year 1			Year 2			Year 3		
	Required	Replacement	Required	Increase Over Preceding Year	Replacement	Required	Increase Over Preceding Year	Replacement	
Furnishings									
Carrel furniture	0.84(1200/7) = 144	0.1(144) = 14	144	--	14	0.84(600/7) = 72	(72)	0.1(72) = 7	
AMS furniture	10	0.1(10) = 1	10	--	1	3	(7)	0.1(3) = 0.3	
RE furniture	1	0.2(1) = 0.2	1	--	0.2	1	--	0.2	
Office furniture	1	--	1	--	--	1	--	--	
Other furniture	5	0.1(5) = 0.5	5	--	0.5	2	(3)	0.1(2) = 0.2	
Air-conditioners	8	--	8	--	--	5	(3)	--	
Carpeting	640 yd	--	640	--	--	350	(a)	--	
Equipment									
Hoffman reading machines	0.57(600/7) = 49	0.2(49) = 10	49	--	10	0.57(300/7) = 25	(24)	0.2(25) = 5	
Tape recorders, reading	0.7(600/7) = 60	0.5(60) = 30	60	--	30	0.7(300/7) = 30	(30)	15	
Tape recorders, math	1.04(600/7) = 52	0.5(52) = 26	52	--	26	26	(26)	13	
Flash-card readers	0.55(600/7) = 47	0.1(47) = 5	47	--	5	24	(23)	2	
Borg-Warner System 80	0.11(1200/7) = 17	0.1(17) = 2	17	--	2	9	(8)	1	
RE equipment	1	0.8	1	--	0.8	1	--	0.8	
Earphones	0.32(1200/7) = 55	0.2(55) = 11	55	--	11	28	(27)	6	
Materials									
EPL tape sets	6	0.4(6) = 2	6	--	2	2	(4)	1	
Other reading tapes	3	0.4(3) = 1	3	--	1	1	(2)	1	
Hoffman materials	6	0.5(6) = 3	6	--	3	2	(4)	1	
Reading software	1/500(600) = 1.2	0.8(1.2) = 1	1.2	--	1	0.6	(0.6)	0.5	
Minisystem, flash-card materials	6	0.4(6) = 2	6	--	2	2	(4)	1	
Other math tapes	3	0.4(3) = 1	3	--	1	1	(2)	1	
Math software	1/500(600) = 1.2	0.8(1.2) = 1	1.2	--	1	0.6	(0.6)	0.5	
Borg-Warner materials	6	0.5(6) = 3	6	--	3	2	(4)	1	
RE supplies	1	0.8	1	--	0.8	1	--	0.8	
Other expenses									
Diagnostic, prescriptive	600	NA	600	600	NA	300	300	NA	
Student notebooks	600	NA	600	600	NA	300	300	NA	
AMS materials	10	NA	10	10	NA	3	3	NA	
Office supplies, expense	1/1000(±200)=1.2	NA	1.2	1.2	NA	0.6	0.6	NA	

NOTE: NA = not applicable.

^aNot salvaged.

Table 16

RESOURCE ACQUISITIONS: FACILITIES

Facility	Base Year		First Year (Performance Contract)				
	Req. (\$)	Cost (\$)	Increase Over Preceding Year	Contr. Supp.	Dist. Supp.	Avail. in Dist.	Net To Be Cost Acq. (\$)
Regular program classrooms	--	--	--	--	--	--	--
Contractor Classroom spaces	--	--	7	--	7	7	7
Remodeling	--	--	yes	--	yes	--	1500
Third Year							
Facility	Second Year (Turnkey)		Third Year				
	Increase Over Preceding Year	Net To Be Cost Acq. (\$)	Res. Rel.	Increase Over Preceding Year	Avail.	To Be Cost Acq. (\$)	Net To Be Cost Resources Released (\$)
Regular program classrooms	--	--	--	4	3 + 1	--	--
Contractor Classroom spaces	--	--	--	--	--	--	3
Remodeling	--	--	--	yes	--	yes	800

Table 17

RESOURCE ACQUISITIONS: STAFF

Staff	Base Year		First Year (Performance Contract)			Second Year (Turnkey)			Third Year		
	Req.	Cost (\$)	Staffing Level	Contr. Supp.	Dist. Supp.	Cost (\$)	Extra Staff	Staffing Level	Cost (\$)	Extra Staff	Staffing Level
<i>Regular program</i>											
Teachers	8.24 ^a	86,500	--	--	--	--	8	--	--	--	4.12
Subs & regular	--	--	--	--	--	--	--	--	--	--	--
Others	--	--	--	--	--	--	--	--	--	--	--
Fringe benefits	yes	13,800	--	--	--	--	--	--	6,900	--	--
Pre- & in-service	yes	--	--	--	--	--	--	--	--	--	--
<i>Contractor</i>											
Teachers	--	--	7.21	7.21	--	--	--	7.21	75,700	--	3.09
Aides	--	--	5	5	--	--	--	5	15,000	--	2
Instructional	--	--	2	2	--	--	--	2	6,000	3	1
AMS	--	--	1	1	--	--	--	1	3,000	1	1
RE	--	--	1	1	--	--	--	1	19,000	1/2	1/2
Director	--	--	1	1	--	--	--	1/2	3,000	1/2	1/2
Secretary	--	--	1/2	--	1/2	8,000	--	--	--	--	--
On-site evaluator	--	--	yes	15 ^b	16 ^c	18,200	--	yes	19,500	1/2	yes
Fringe benefits	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	9,100	--	--

^aFractional portion represents expected need for substitute teachers.^bFor Director.^cFor all others.

Table 18

RESOURCE ACQUISITIONS: FURNISHINGS, EQUIPMENT, AND MATERIALS

Item	Base Year			First Year (performance contract)					Second Year (turnkey)					Third Year				
	Incr. and Repl. (\$)	Cost (\$)	Incr. and Repl.	Contr. Supp.	Dist. Supp.	Avail. in Dist.	To Be Acq'd	Net Cost (\$)	Res. Rel.	Incr. and Repl.	Avail-able	To Be Acq'd	Net Cost (\$)	Res. Rel.	Incr. and Repl.	Avail-able	To Be Acq'd	Net Cost (\$)
<i>Furnishings, R.P.a</i>																		
Desks	200	--	--	--	--	--	--	--	200	--	--	--	--	--	100	100	--	--
Classroom (shelves, etc.)	Maint.	--	--	--	--	--	--	--	7	--	--	--	--	--	4	4	--	--
<i>Furnishings, contractor</i>																		
Carels	--	--	158	--	158	--	158	11,900	--	14	--	14	1,100	--	--	--	--	65
AMS	--	--	11	--	11	5	6	1,200	--	1	--	1	200	--	--	--	--	6.7
RE	--	--	1.2	--	1.2	1.2	--	--	--	0.2	--	0.2	--	--	--	--	--	--
Office	--	--	1	--	1	1	--	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	5.5	--	5.5	--	5.5	1,400	--	0.5	--	0.5	200	--	--	--	--	2.8
Air-conditioning	--	--	8	--	8	--	8	4,800	--	--	--	--	--	--	--	--	--	3
Carpeting	--	--	640 yd	--	Yes	--	Yes	4,200	--	--	--	--	--	--	--	--	--	--
<i>Equipment, R.P.</i>																		
<i>Equipment, contractor</i>																		
Reading machines	--	--	59	--	59	--	59	23,600	--	10	--	10	4,000	--	--	--	--	19
Tape recorders	--	--	168	--	168	--	168	4,200	--	56	--	56	1,400	--	--	--	--	28
Flash-card readers	--	--	52	--	52	--	52	13,000	--	5	--	5	1,300	--	--	--	--	21
B-W System 80	--	--	19	--	19	--	19	9,500	--	2	--	2	1,000	--	--	--	--	7
RE equipment	--	--	1.8	--	1.8	--	1.8	500	--	0.8	--	0.8	200	--	0.8	--	0.8	200
Earphones	--	--	66	--	66	--	66	500	--	11	--	11	100	--	300	300	--	21
<i>Reading materials, R.P.</i>																		
(texts, resources)	Repl. 600	--	--	--	--	--	--	--	600	--	--	--	--	--	300	300	--	--
<i>Math materials, R.P.</i>																		
(texts, resources)	Repl. 600	--	--	--	--	--	--	--	600	--	--	--	--	--	300	300	--	--
<i>Materials, contractor</i>																		
EPL tapes	--	--	8	--	8	--	8	4,800	--	2	--	2	1,200	--	--	--	--	3
Other reading tapes	--	--	4	--	4	--	4	2,400	--	1	--	1	600	--	--	--	--	1
Hoffman materials	--	--	9	--	9	--	9	31,500	--	3	--	3	10,500	--	--	--	--	3
Reading software	--	--	2.2	--	2.2	--	2.2	2,200	--	1	--	1	1,000	--	--	--	--	0.1
Minisystem, flash-card materials	--	--	8	--	8	--	8	20,000	--	2	--	2	5,000	--	--	--	--	3
Other math tapes	--	--	4	--	4	--	4	2,400	--	1	--	1	600	--	--	--	--	1
Math software	--	--	2.2	--	2.2	--	2.2	4,400	--	1	--	1	2,000	--	--	--	--	0.1
B-W materials	--	--	9	--	9	--	9	20,700	--	3	--	3	6,900	--	--	--	--	3
RE materials	--	--	1.8	--	1.8	--	1.8	200	--	0.8	--	0.8	100	--	0.8	--	0.8	100
<i>Other expenses, contractor</i>																		
Diagnostic, prescriptive	--	--	600	--	600	--	600	--	--	600	--	600	3,000	--	300	--	300	1,500
Student notebooks	--	--	600	--	600	--	600	300	--	600	--	600	300	--	300	--	300	200
AMS materials	--	--	10	--	10	--	10	--	--	10	--	10	10,000	--	3	--	3	3,000
Office supplies	--	--	1.2	--	1.2	--	1.2	--	--	1.2	--	1.2	1,900	--	0.6	--	0.6	1,000

^aRegular program.

Table 19

RESOURCE ACQUISITIONS: TRAINING AND CONSULTATION

Item	Base Year		First Year				Second Year		Third Year	
	Req.	Cost (\$)	Req.	Contr. Supp.	Dist. Supp.	Cost (\$)	Req.	Cost (\$)	Req.	Cost (\$)
<i>Regular program</i>										
Pre- and in-service	yes	(a)	--	--	--	--	--	--	yes	--
<i>Contractor</i>										
Pre-service	--	--	yes	yes	--	--	yes	3,000	yes	3,000
In-service, consultation	--	--	yes	yes	--	--	yes	7,500	yes	7,500
Start-up expense	--	--	yes	yes	--	--	--	--	--	--
Overhead and fees	--	--	yes	yes	--	--	yes	3,000	yes	3,000
Management support	--	--	yes	--	yes	10,000	--	--	--	--

^aLow variable cost.

buildings. Positive balances represent the need to absorb excess staff into other programs.

Estimated Program Cost. Finally, the cost columns of Tables 16-19 are totaled and summarized in Table 22 as the cost to the district of having the program in operation over a three-year period. For the first year, three estimates of the contractor's fee are indicated, based respectively on low achievement gains (0.3 of an achievement year), high gains (2.0 achievement years), and "expected" gains (0.8 achievement years). Payment was calculated assuming a rate of \$60 per year's gain per instruction unit. The totals indicate the yearly cash outlay required to provide reading and math instruction to 600 pupils, plus a large portion of AMS.

It should be emphasized that the motive here has been to illustrate a format for detailed analysis of the cash flow, resource inventories, and staff in a hypothetical program. Since programs vary widely in scope, resource prices, and inherited resources, the totals in Table 22 are not intended as a universal comparison of regular instruction with instruction under the planned program, nor would they always be appropriate for generalized higher-order planning decisions in contexts of higher uncertainty. Those who must make such higher-order decisions would be better served by the Comparable Replication Cost procedure discussed earlier.¹⁰

¹⁰ As noted above, this illustration has been based on the CMES program in Grand Rapids. However, we have freely altered some of the premises of the example to suit various purposes; therefore the example cannot be taken as an authoritative picture of the methods and programs of CMES. For example, CMES generally prefers to supply materials and equipment, although in Grand Rapids these were supplied by the district. Furthermore, for purposes of illustration, rather generous allowances were made in setting up resource requirements and replacement factors.

Table 20

SUMMARY OF CHANGES IN ON-HAND INVENTORIES

Item	Year 1			Year 2			Year 3		
	Addi- tions	Reduc- tions	Net	Addi- tions	Reduc- tions	Net	Addi- tions	Reduc- tions	Net
Regular desks	200	--	200	--	--	--	--	100	-100
Regular classroom furniture (sets)	7	--	7	--	--	--	--	4	-4
AMS furniture (sets)	--	5	-5	--	--	--	6.7	--	-1.7
RE furniture (sets)	--	1.2	-1.2	--	0.2	-0.2	--	--	--
Office furniture (sets)	--	1	-1	--	--	--	1	--	1
Regular program materials	600	--	600	--	--	--	--	300	-300
Reading	600	--	600	--	--	--	--	300	-300
Math	--	--	--	--	--	--	65	--	65
Carrel furniture (sets)	--	--	--	--	--	--	2.8	--	2.8
Contractor "other" furniture	--	--	--	--	--	--	3	--	3
Air-conditioning units	--	--	--	--	--	--	19	--	19
Reading machines	--	--	--	--	--	--	21	--	21
Flash-card readers	--	--	--	--	--	--	7	--	7
Borg-Warner System 80	--	--	--	--	--	--	21	--	21
Earphones	--	--	--	--	--	--	28	--	28
Tape recorders	--	--	--	--	--	--	3	--	3
EPL tapes (sets)	--	--	--	--	--	--	1	--	1
Other reading tapes (sets)	--	--	--	--	--	--	3	--	3
Hoffman materials	--	--	--	--	--	--	3	--	3
Minisystem and flash-card reader materials	--	--	--	--	--	--	3	--	3
Other math tapes	--	--	--	--	--	--	1	--	1
Borg-Warner materials	--	--	--	--	--	--	3	--	3
Reading software	--	--	--	--	--	--	0.1	--	0.1
Math software	--	--	--	--	--	--	0.1	--	0.1

Table 21

SUMMARY OF CHANGES IN STAFF

Job Type	Year 1			Year 2			Year 3		
	Released (+)	New Require- ment (-)	Net	Released (+)	New Require- ment (-)	Net	Released (+)	New Require- ment (-)	Net
Teachers	8.24	7.21	1.03	--	--	--	3.09	4.12	1.06
Aides	--	6	-6	--	--	--	3	--	3
Director	--	1	-1	--	--	--	1/2	--	1/2
Secretaries	--	1	-1	1/2	--	1/2	--	--	--
On-site monitor	--	1/2	-1/2	1/2	--	1/2	--	--	--

Table 22

SUMMARY OF COST FOR READING AND MATH INSTRUCTION:
600 PUPILS IN PERFORMANCE CONTRACT PROGRAM
AND REGULAR SCHOOL INSTRUCTION

Item	Base Year	Year 1	Year 2	Year 3
Direct district outlay	101,700	199,100	191,000	136,600
Contractor performance fee	--	21,600	--	--
Low (0.3 gain)	--	57,600	--	--
Expected (0.8 gain)	--	144,000	--	--
High (2.0 gain)	--	--	--	--

Appendix C
EIGHT ILLUSTRATIVE LEA-LSC CONTRACTS

NORFOLK-LRA CONTRACT

AGREEMENT entered into this 23 day of November 1970 by and between Norfolk City Schools a duly established school district of the Commonwealth of Virginia (hereinafter referred to as LEA), and LEARNING RESEARCH ASSOCIATES, INC., a Corporation duly organized and existing under and by virtue of Laws of the State of New York (hereinafter referred to as the "Contractor").

WITNESSETH

WHEREAS the State Education Agency (hereinafter referred to as SEA) has expressed interest in, and given encouragement to, a performance contracting project in reading, being conducted with Title I (Elementary and Secondary Education Act) funds on a demonstration basis by several localities in the Commonwealth of Virginia during the school year 1970-71, and,

WHEREAS the Local Education Agency (LEA) recognizes its duty to improve the reading skills of students who are now below standard,

WHEREAS the project shall continue for the 1970-71 academic year, consisting of approximately 150 class periods of instruction in reading. Management support will be provided to the LEA and the entire project will be evaluated.

WHEREAS the references for parties involved in the project are:

Contractor--Learning Research Associates, Inc.

LEA--Local Education Agency, the fiscal agent as designated
by Title I ESEA Legislation

SEA--State Education Agency

Project Coordinator--SEA representative

Project Director--LEA's representative

Project Administrator--Contractor's representative

Management Support Group--Education Turnkey Systems, Inc.

Principal offices: 1660 L St. N.W., Washington, D.C.

Evaluation Contractor--Bureau of Research, School of Education, University of Virginia, Charlottesville, Va.

NOW, THEREFORE, it is agreed by and between the parties:

- 1.01 The term of this Agreement shall be from the date hereof up to and including June 30, 1971.
- 1.02 The parties hereto understand and agree that this Agreement is conditioned upon the signing of a Letter of Agreement between the SEA and the Contractor regarding the availability of the Title I funds aforementioned.
- 1.03 The Contractor agrees to provide High Intensity Learning Centers (hereinafter referred to as the Program) for students deficient in reading, presently enrolled in public schools of the LEA.
- 1.04 The Program shall consist of approximately 150 class days, each period being of approximately one hour in length, through the academic school year 1970-71.
The Contractor shall:
 - o Organize and operate the Program in reading.
 - o Install the Program.
 - o Monitor and supervise the Program.
 - o Train the teachers who are selected for the Program and orient management staff selected by the LEA.
 - o Assist and guide the teachers in the operation of the Program.
 - o Review the performance of the students enrolled in the Program.
 - o Recommend alternative approaches with regard to the performance of each of the students enrolled in the Program.

- o Instruct the teachers assigned to the Program in the use of the hardware used in the Program, including but not limited to, tape recorders and reading devices.
- o Create the special environment necessary for the intensive learning provided by the Program.
- o Submit an acceptable Management Plan to the LEA and Management Support Group for their use in monitoring the Program.
- o Provide draperies, area carpet and air conditioning in accordance with the Contractor's proposal dated August 13, 1970.

1.05 MOREOVER:

- o Contractor agrees to cooperate fully with other contractors of the SEA which are responsible for tasks and activities directed or approved by the SEA for ensuring the success of this project. Contractor will provide necessary information for such parties on a timely basis and during on-site visits.

For the purpose of the turnkey analysis, Contractor shall maintain records to reflect all actual start-up and operating costs in accordance with reporting forms and procedures, and at specified intervals required by Project Coordinator, as established by the Management Support Group, Education Turnkey Systems, Inc., and LEA.

- o Contractor agrees to supply all data and other information required by the Project Coordinator with a copy to the LEA for the reporting system and for other uses in a manner reflecting the overall quality of form and substance which can be expected of the Contractor.
- o Contractor further agrees to maintain sufficient personnel and equipment required over the full contract period to assure the maximum possible educational development and supervision of each student.

1.06 LEA agrees to

- o maintain an information exchange jointly developed with

Contractor involving teachers, counselors, consultants, and parents.

- o host visitors to the program on a pre-determined schedule and in accordance with procedures approved by the Project Coordinator and LEA in order not to interfere with the reasonable operations of the Program or the LEA.
- o to be responsible for ensuring that any student enrolled in the Program and attending school on a given day will attend the Program.
- o shall arrange scheduling of classes, where appropriate, to facilitate student attendance.
- o make replacement students available whenever they are needed.

1.07 MOREOVER:

- o LEA agrees to maintain, clean and repair in a manner and with the level of effort exerted elsewhere in the school, the premises, fixtures, furnishings and non-instructional equipment occupied, owned or controlled by the Contractor.
- o LEA agrees to provide reasonable security for the premises occupied by the Contractor and further agrees to provide at least one person two hours a day to perform clerical work. Schedule of the clerical services to be performed shall be mutually agreed to by the parties hereto.
- o LEA shall owe the same duty of care and responsibility to student participants in Contractor's instructional components whether operated during or after regular school hours, as it does to those same students when in regular classroom situations.
- o LEA agrees to be responsible for ensuring that any student enrolled in the Program and attending school on a given day will attend the Program, and shall arrange scheduling of classes, where appropriate, to facilitate student attendance. Transportation, if necessary, of the students shall be provided by the LEA. Such transportation shall be the transportation ordinarily provided by the LEA.
- o LEA agrees to pay to the Contractor the cost required for

Contractor to obtain liability insurance on students participating in High Intensity Learning Centers. This cost is not to exceed \$1.89 per student x 250 students. This insurance will render harmless Norfolk City Schools to any claim or action resulting from this Program. The insurance policy shall be purchased by the Contractor and any liability of the Program shall be the responsibility of the Contractor.

1.08 It is understood and agreed by both parties:

- o After-school project operating hours shall be jointly established by LEA and Contractor, where appropriate and reasonable, to allow students who have been absent to complete the work they have missed.
- o The teachers involved in the Program should devote their full time to it, and agree to use their best efforts in regard to same.
- o It is understood and agreed that all teachers participating in the Program described herein shall remain employees of the LEA and shall not be considered agents, employees or servants of the Contractor or its designees. LEA and the participating teachers understand and agree that in order to effectively execute the Program created, designed and administered by the Contractor, directions for the proper implementation of said Program must come from the designee of the Contractor and the teachers concerned agree to follow the directions regarding the operation of the Program.
- o The Contractor agrees that it will abide by the general rules and regulations of the school board.
- o The Contractor shall reimburse the LEA for the payments made by the LEA to the substitute teachers employed by the LEA during the training of the teachers selected under this Program.
- o The LEA agrees to provide the Contractor with a statement of the rate paid to the substitute teachers employed by the LEA during the training of the teachers selected under this Program.

- o The LEA agrees to provide the Contractor with a statement of the rate paid to the substitute teacher(s), but in no event shall any payment made by the Contractor exceed the sum of \$35 per day.
- o As set forth in the Contractor's Proposal dated August 13, 1970, the Contractor shall provide one week of training in the Program for each of the selected teachers.
- o The Contractor may not release test results or cause them to be made public in any way except with written permission of the LEA and approval by the Project Coordinator.
- o A pre-audit of the Contractor's instructional program may be performed prior to but not later than December 7, 1970, to determine that standardized test items are not included in the curriculum, with continuing audits to be performed thereafter.

1.09 Selection of Students:

- o Students who are potential participants or have been selected for this Program will have grade level deficiencies in reading as determined by any one of three nationally normed, standardized, commercially available achievement tests nominated by the Contractor and selected by the Evaluation Contractor and administered by the Evaluation Contractor or his designee within 12 school days of the commencement of the Program. Deficient students on this test will be assigned to the Program, except such pupils who are excluded by the Project Director on account of handicapping conditions. For those students and any replacement students who are placed in the Program within thirty days of the above testing, those test scores shall be used as the pre-test for payment purposes, as provided above.
- o In the St. Helena School, there will be 125 students deficient in reading, approximately 35 from grade 4, 35 from grade 5, and 50 from grade 6, available for entry into the ALAC on November 3, 1970. There will also be a pool of approximately 50 students deficient in reading available as replacements.

- o In the Jacox School, there will be 125 students deficient in reading, approximately 50 from grade 7, 40 from grade 8, and 35 from grade 9, available for entry into the ALAC on October 19, 1970. There will also be a pool of approximately 50 students deficient in reading available as replacements.

2.01 During the first ten school days in which a student participates in the Program, that student shall receive diagnostic testing by Contractor to determine individual treatment. If, during that ten school day period, Contractor states in writing to the Project Director that the student is not qualified to participate because of emotional or mental reasons unrelated to standardized test results, the Contractor may request the student's removal in writing to the Project Director. If the matter is not resolved within two days, the Project Director shall notify the Project Coordinator and upon the Project Coordinator's determination, an individual test will be administered, at the cost of the Evaluation Contractor, to that student by a qualified professional employed and/or designated by the Evaluation Contractor who shall then make a recommendation to the Project Coordinator. In all cases, the Project Coordinator's decision on student participation shall be final and binding. Those students remaining after the ten school day period shall remain in the Program for the full number of class days normally scheduled for the school for all students.

2.02 For the purpose of this contract, the following are the only reasons for a student's leaving the program: commitment to institutional care precluding attendance in the Program; removal from the school district; induction into the armed forces; illness or incapacitation for a continuous period of ten school days or for intermittent periods totaling fifteen days in any three-month period; if parents or guardian request removal; removal of student as a direct result of court order; or if the student reaches seventeen years of age or withdraws

for severe financial reasons. If a student drops out for any reason other than the above, the LEA is not obligated to provide a replacement. In all cases, Contractor shall give written notice to Project Director when in its opinion a student's absences warrant removal from the Program. Project Director shall, if possible, obtain a written statement from the parent or guardian as to the reason for the student's removal from the Program. The Evaluation Contractor shall certify the validity of the cause of the student's withdrawal from the Program. LEA will furnish daily to the Center Teacher the names of any students absent from regular classes. The Center Teacher will furnish to the LEA a daily list of students absent from the Program. LEA shall use the same efforts and procedures as are used for all other students in the school district to ensure regular attendance and attendance at make-up and at future sessions.

- 2.03 If a student leaves the program, it shall be certified in writing to the Contractor by the Project Director. A replacement will be selected from the pool by the Evaluation Contractor within three school days and placed in the Program within two additional school days by the LEA. Replacement students placed in the Program after thirty calendar days from the date of pre-testing shall be tested again upon entry into the Program. No replacements shall be made later than thirty days before the end of the project. If the pool needs to be increased, students will be selected for inclusion on the same basis as students were originally selected. Final decision on replacements rests with the Project Coordinator.

- 3.01 Testing of student progress under the authority of the Project Coordinator or its designee shall follow the procedures described below.

- o Project Coordinator with the advice of the Management Support Contractor and the Evaluation Contractor shall jointly select and/or approve three commercially available, nationally normed, standardized reading tests or subtests.

- o Within twelve school days of the Contractor's first day of classes, Evaluation Contractor shall administer the three tests, one test per student, to the appropriate grade levels. Contractor shall not be told, nor shall he attempt to determine in any manner whatsoever what test or what form of what test any student received. Contractor shall be informed by the Evaluation Contractor five days prior to the pre-test of the level of the test to be used for each grade level involved in the project. Contractor shall be informed by the Evaluation Contractor of each student's pre-test grade level score within 16 school days of the administration of the tests in each district.

No sooner than 12 days prior to the Contractor's last day of classes, Evaluation Contractor or designee shall administer the post-test to each student. The post-test shall be a different form of the same test that was administered to the student as the pre-test. LEA will certify the conditions of the testing in writing in a format to be supplied by the Management Support Group as approved by the Evaluation Contractor. In the event that the parties hereto, along with the Evaluation Contractor, mutually agree that the conditions of testing for payment purposes, administered by the Evaluation Contractor, are not reasonably satisfactory nor comparable, a re-test will be administered.

Prior to the post-testing, the Contractor shall not be told, nor shall he attempt to determine in any manner whatsoever, what test or what form of what test any student shall receive. Entry and exit level of each student participant will be determined by pre- and post-test scores on any one of three nationally normed, standardized, commercially available achievement tests administered at the beginning and end of the project by the Evaluation Contractor which shall supervise these and all other evaluation tests. Such

tests will be the basis for determining student achievement gains and Contractor reimbursement as provided herein. No information whatsoever shall in any way be disclosed to Contractor as to what test or forms of the test have been or will be used.

- 3.02 The Evaluation Contractor shall administer and/or supervise the interim assessment tests.
- o The Contractor shall submit no later than November 23, 1970 to the Evaluation Contractor the test items it proposes to use for each Interim Test, #1 through #4. Contractor shall indicate the objectives to be assessed and the relationship of the objectives to the Contractor's curriculum. The Contractor shall submit no fewer than three test items for each objective.
 - o The Evaluation Contractor shall certify to the Project Coordinator that the objectives to be assessed are a fair measure of the Contractor's Program and the achievement potential of the students.
 - o If the above requirements are not met to the satisfaction of the Evaluation Contractor, he shall make recommendations for improvement in writing to the Project Coordinator and the Contractor.
 - o The Project Coordinator with the assistance of the Project Director shall suggest to the Contractor a remedy to the conditions complained of. Within two working days the Contractor will notify the Project Coordinator of corrective action taken, if any. The Project Coordinator shall have five working days within which to approve or reject the corrective action, if any.
 - o At the conclusion of the period of ten working days from date of first notice to the Contractor, the Project Coordinator must either certify that the pool of interim performance objectives is approved or that he rejects the corrective action. If the Project Coordinator fails to take any action, then certification of the pool of interim

- performance objectives shall be deemed to be made effective as of the tenth working day after notice and payment shall be made in accordance with paragraph 4.05.
- o If the Project Coordinator and the Contractor fail to reach agreement with regard to any of the above, then the appeal procedures set forth in paragraph 7.01 shall apply, except that the LEA will select the party jointly with the Evaluation Contractor.
- 3.03
- o The test question item pool procedures and the use of a variety of standardized tests is intended to prevent affirmative influencing of student performance on standardized, norm reference tests by foreknowledge of questions to be asked, commonly called "teaching to tests." Suspicion that such an event has been attempted or accomplished shall be stated in writing by any parties to this contract and project to the Project Coordinator and communicated to the Management Support Group. Project Coordinator and members of the Title I staff of the SEA or its designees shall visit the project site and determine the validity of the charge, the number of participants affected, and whether any damage was caused. The Project Coordinator shall then make findings and recommendations to the Project Director and the Contractor. The Contractor has the right to object to any of the findings reached by the Project Coordinator.
 - o If the parties fail to reach agreement the appeal procedure shall apply and the project shall continue pending final determination of the appeal.
 - o The Project Director shall have the authority to terminate the project for cause at that point and to require the Contractor to return all funds paid him by the LEA.
- 4.01
- The total amount to be paid to the Contractor shall be based on the performance of each of the students enrolled in the Program. The performance of each of the students is based on both interim performance tests as defined herein and upon a pre- and post-test as defined herein. The pre-test

aforementioned shall be administered within twelve days of the beginning of the Program and the post-test shall be administered within twelve days of the completion of the Program.

4.02 Payment on Basis of Standardized Test Results.

- o The average maximum unit final payment the Contractor shall receive for student achievement measured by pre- and post-test scores on national standardized tests shall not exceed \$63.75 per student, or a total amount based on pre- and post-test results for all students on standardized tests not to exceed \$15,937.50 for 250 students.
- o Determination and calculation of payment shall be made on the basis of a pre- and post-test as defined herein:
 - \$63.75 per student enrolled in the Program for the full term of instruction who achieves a reading grade level increase of 1.7 grade level gain as reported by the standardized tests to be utilized under the terms of this contract.
- o In the event that a student exceeds the grade level gain of 1.7, the Contractor shall be credited in the determination and calculation of payment with the sum of \$4.00 for each 0.1 grade level gain above 1.7 as reported by the standardized tests to be utilized.
- o In the event that a student does not exceed the grade level gain of 1.7, the Contractor shall have deducted in the determination and calculation of payment the sum of \$4.00 for each 0.1 grade level below the 1.7 gain.
- o In the event that a student leaves the Program prior to completing the Program, and has no post-test score, the calculation for payment will be determined as follows:
 - The amount paid to the Contractor for the average student achievement in the same grade level, multiplied by the ratio of the number of completed instructional periods by the student who leaves, to the total number of periods actually provided to the grade level of the withdrawing student, through the entire term of instruction.

- o In the event that a student leaves the Program after at least thirty periods of instruction and is pre- and post-tested, the Contractor will be paid an amount equal to the projected gain that the student would have achieved had he completed the Program prorated on the basis of the actual number of periods spent in the Program.
- o Determination and calculation of payment with regard to students who have I.Q.'s of 74 or below, as determined by any standard or acceptable test to the Evaluation Contractor, administered by the LEA or its duly authorized designee, shall be based on the determination and calculation of payment set forth in the foregoing paragraphs. However, the grade level gain set forth in those paragraphs is changed for the purposes of this paragraph from a grade level gain of 1.7 to a grade level gain of 0.4.

4.03 Payment Based on Interim Performance Tests.

- o The Contractor agrees to accept credit for payment on the basis of the success or failure of each student's performance on a battery of objectives approved by the Project Coordinator, in consultation with the Evaluation Contractor, and selected individually for each pupil based on his diagnosis. The total payment for performance on interim performance tests for all of the 250 students involved in this project shall not exceed \$5,312.50.

With regard to the interim tests, the following is the basis of calculation of the amount to be paid to the Contractor herein.

- o After a student correctly answers 85% of the test items on each interim objective prescribed by the Contractor and approved by the Evaluation Contractor as stated herein, the Contractor shall be credited in the determination and calculation of final payment the sum of \$21.25.
- o In the event that a student answers correctly more than 85% of the test items on the interim objectives in excess of those originally prescribed and approved, then the Contractor

shall be credited in the determination and calculation of payment with the sum of \$2.00 for each of those interim objectives in excess of those originally prescribed by the Contractor and approved by the Evaluation Contractor.

- o In the event that a student fails to answer correctly 85% of the test items on the interim objectives described above, then there shall be deducted in the determination and calculation of payment to the Contractor the sum of \$2.00 for each objective below those originally prescribed by the Contractor and approved by the Evaluation Contractor.
- o If a student leaves the Program at any time prior to completion of the Program and fails to complete the four interim tests, the calculation of payment shall be as follows:

The amount credited for the average student achievement attained by students in the same grade level as the withdrawing student, multiplied by a ratio of the number of instructional periods actually attended by the withdrawing student to the total number of periods actually provided to the grade level of the withdrawing student, through the entire term of instruction.

- 4.04 Within twenty days of the completion of the Program, a detailed certified statement shall be submitted to the Contractor and the LEA by the Evaluation Contractor. The statement shall be supported by data reflecting the aforementioned calculations and determinations. The statement shall clearly disclose the amount, if any, to be paid to the Contractor by the LEA, or the amount to be paid to the LEA, if any, by the Contractor. Contractor reserves the right to inspect the test records and supporting data, including raw scores and documentation. Payment shall be made in any event within thirty days after the statement is received by the Contractor or LEA.

- 4.05 LEA agrees to pay the Contractor the total sum of \$17,000 payable in six equal installments, each to be paid within seven (7) days after the LEA school board meeting immediately following the occurrence of these events:

- (a) The approval by the Evaluation Contractor of the interim performance objectives and the test items pertaining thereto submitted by the Contractor.
- (b) Determination by LEA that at least 50% of the participating students are receiving instruction under the provisions of this Agreement.
- (c) Administration by the University of Virginia, School of Education, Bureau of Research or its designee of the four interim tests which shall take place within seven days of the following dates:

Interim Test #1--December 16, 1970
Interim Test #2--January 28, 1971
Interim Test #3--April 14, 1971
Interim Test #4--June 15, 1971

It is understood that the aforesaid sum of \$17,000 constitutes 80% of the average maximum total sum which equals the total sum of \$21,250, based on the enrollment in the Program of 250 students.

- 4.06
 - o If the LEA does not provide the stipulated number of students (250) within ten school days after the Contractor's Program is operational, the Contractor shall be credited with the sum of \$85.00 in the determination and calculation of payment per student vacancy. If LEA provides a replacement in the Program after the ten day period, the credit of \$85.00 will be prorated in accord with paragraph 4.02 and 4.03.
 - o In the event a replacement student enters the Program, the basis for determination and calculation of payment shall be the same as in paragraph 4.02 and 4.03 for the pre- and post-test scores and for the interim tests.
- 4.07 In the event that 150 days of instruction are not available for Program operation due to: (a) insufficient number of school days remaining in the regular school year; (b) testing time required by the Evaluation Contractor; or (c) any event beyond the control of the LEA which precludes the LEA from

making students or Program facilities available to the Contractor, the procedure for determining and calculating credit for payment will be as follows:

The grade level gains specified in paragraph 4.02 of 1.7 or 0.4 grade level gains will be multiplied by a ratio of the number of days between the opening date of the Program and the date of the regularly scheduled post-test less any other days subtracted due to conditions "a", "b", and "c" described above to 150 days. The grade level gain obtained and described in this paragraph shall be substituted in paragraph 4.02 for the grade level gain 1.7 or 0.4 contained therein and the determination and calculation of payment shall be made as provided for in paragraph 4.02. The opening date of the Program will not be later than November 4, 1970.

- 5.01 Contractor certifies that the instructional system, materials, and equipment to be used in the project are the same as, or do substantially duplicate, those listed or otherwise identified in its response dated August 13, 1970 to the RFP dated July 13, 1970.
- 5.02 If, during contract period, Contractor wishes to change the instructional system, materials, equipment used, or personnel requirements, it must notify Project Coordinator of any substantial changes and seek approval in accordance with procedures prescribed by the Project Coordinator, the Management Support Group, and LEA.
- 5.03 The LEA understands that it may purchase from the Contractor new materials and equipment of the type used in the Program. On its part, the Contractor agrees that it will offer such materials and equipment at a price no greater than offered to its most favored customer. The Contractor hereby grants to LEA the option to purchase all or part of the equipment, materials, and furnishings used by the Contractor in the Program for the amount set forth in the Contractor's Proposal dated August 13, 1970, less 30% depreciation of actual purchase

cost. The LEA must exercise the aforesaid option no later than July 15, 1971. Notice of the exercise of the option must be given in writing, addressed to the Contractor at 1501 Broadway, New York, N.Y. 10036. Such writing shall contain a statement by the LEA as to the equipment, materials, and furnishings it wishes to purchase from the Contractor.

In the event that the LEA does not choose to exercise the option, the Contractor shall have up to and including August 15, 1971 to remove its property from the premises of the LEA.

5.04 The Contractor guarantees that the Program used during the 1970-71 school year will achieve at least 50% of the cost-effectiveness (as hereinafter defined) during the school year 1971-72 upon the following conditions:

- (a) that the Contractor, where necessary, provides additional training, controls materials used, supervises and monitors the Program, and
- (b) that the LEA pays for materials and services set forth above.

As used in this paragraph, cost-effectiveness is defined to mean the average per student gain achieved during the school year 1970-71 based on the same achievement tests used during the 1970-71 school year at the same per student cost (student cost is an amount based on the number of students enrolled divided by the actual costs of the Contractor) as during the school year 1970-71.

6.01 All terms, conditions, and provisions hereof shall inure to and shall bind the parties hereto and for each of their successors and assigns. Contractor shall not assign or transfer its interest, responsibility, or claims payable under this contract without prior written consent of the LEA.

6.02 The Contractor agrees within five days of the effective date of this contract to secure the repayment of any money received by the Contractor under this contract, in the event the Contractor does not perform in accordance with the conditions

of the contract. Such security must be acceptable to the LEA.

- 6.03 LEA may terminate this contract when it concludes that such termination is in the best interest of the LEA. In such event, the LEA shall bear no liability for costs the Contractor incurred related to this project after notice of termination. Notice shall be given to Contractor by means of a registered letter mailed to the Contractor at its office at 1501 Broadway, New York. In the event of such termination before Contractor has offered fifty days of instruction, or in any event if 80% or more of the students cannot be post-tested, Contractor shall be reimbursed based on audited costs incurred, including direct overhead and general and administrative costs up to receipt of notice of termination plus an additional charge of ten percent of the actual costs of the Contractor. In no event will the total cost reimbursement to the Contractor be greater than the total maximum amount stated in paragraph 4.02 and 4.03.
- o For the purpose of this contract Direct Costs shall be defined as the expenses incurred and payments made by the Contractor as a result of work, labor and services performed and furniture, fixtures and materials purchased or provided exclusively under the terms of this contract.
 - o Overhead Costs are herein defined as expenses incurred or payments made which are not directly identifiable with the performance of the contract and may consist of but shall not be limited to the following: bookkeeping, payroll, billing, central office evaluation of the project.
 - o General and Administrative Costs are defined as the costs of overall management of the corporation.
 - o In the event that the statement of audited costs submitted by the Contractor is unacceptable to the LEA, then the SEA Title I ESEA auditor will perform an audit whose findings will be binding.
 - o If after fifty periods of instruction by Contractor more

than 80% of the students can be post-tested, Contractor shall be reimbursed on the basis of pre-test, post-test net gain scores as described in paragraph 4.02 and on the basis of interim tests as described in paragraph 4.03.

- 7.01 Except as otherwise provided, any dispute arising under this contract shall be decided by the Project Coordinator who shall reduce his decision in writing and mail or otherwise furnish a copy to each of the parties hereto. Within ten days of the receipt of such decision the Contractor or the LEA may serve on the other and the Project Coordinator a notice of appeal. Within five days thereafter each of the parties hereto, with the exception provided for in paragraph 3.02 shall select one person who in turn shall agree on a third person who together with the persons selected by the parties hereto shall hear and determine the appeal, a decision of the majority being final. If the persons selected fail to agree on a third person the parties hereto shall continue to select individuals until the persons selected are able to agree on a third person.
- 7.02 The Contractor within 15 days of the effective date of this contract shall apply in an appropriate manner to the Commonwealth of Virginia to qualify under the laws of the Commonwealth to do business in the Commonwealth of Virginia.

IN WITNESS WHEREOF the parties have signed this Agreement the day,
month and year first above written.

Norfolk Public Schools
Commonwealth of Virginia

By _____
Mr. Paul H. Smith
Assistant Superintendent of Finance
Agent--Norfolk City School Board

Learning Research Associates, Inc.

Concurrence

Authorized Official

University of Virginia
Bureau of Research
School of Education

By _____
President

AMENDMENT AND MODIFICATION OF AGREEMENT BETWEEN LEARNING RESEARCH AS-
SOCIATES, INC. AND _____
DATED:

Section 4.02 is hereby amended by adding thereto the following:

"Notwithstanding anything contained herein, any first grade stu-
dent who is not pre-tested and whose I.Q. is 75 or above must achieve
on the post-test a grade equivalent of 2.0. For each child reaching
the aforesaid grade level, payment in the amount of \$63.75 per student
enrolled in the program for the full term of instruction shall be made
to the Contractor.

In the event the aforesaid student exceeds the grade equivalent
of 2.0 the Contractor shall be credited in the determination and cal-
culation of payment in the sum of \$4.00 for each 0.1 grade level gain

above the grade equivalent of 2.0 as reported by the standardized tests to be used.

In the event that such a student does not achieve a grade level equivalent of 2.0 the Contractor shall have deducted in the determination and calculation of payment the sum of \$4.00 for each 0.1 grade level below the grade equivalent of 2.0.

Notwithstanding anything contained herein, any first grade student who is not pre-tested and whose I.Q. is 74 or below must achieve on the post-test a grade equivalent of 1.4. For each child reaching the aforesaid grade level, payment in the amount of \$63.75 per student enrolled in the program for the full term of instruction shall be made to the Contractor.

In the event the aforesaid student exceeds the grade equivalent of 1.4 the Contractor shall be credited in the determination and calculation of payment in the sum of \$4.00 for each 0.1 grade level gain above the grade equivalent of 1.4 as reported by the standardized tests to be used.

In the event that such a student does not achieve a grade level equivalent of 1.4 the Contractor shall have deducted in the determination and calculation of payment the sum of \$4.00 for each 0.1 grade level below the grade equivalent of 1.4.

Students enrolled in grades 2 and 3 who do not answer any item in the pre-test correctly shall have assigned to them the lowest grade equivalent provided for in the test administered.

With the exception of the students described in the seven (7) paragraphs immediately preceding this paragraph there shall be no re-pre-testing of the students. Enrolled students who were not tested during the pre-test administration shall be deemed to have a score on the standardized achievement test which he would have taken which will be equal to the mean score of those pre-tested students enrolled in the program and on the same grade level and in the same school as those students who are not pre-tested."

Section 2.03 is hereby amended by adding thereto the following:

"Replacement students in the program shall be tested within seven (7) school days from the date of notification of enrollment in the program given to the Evaluation Contractor."

Section 4.03 shall be modified by deleting in paragraphs 2, 3 and 4 thereof "85%" and substituting "80%" wherever it appears in the aforesaid paragraphs.

Section 3.02 shall be amended by adding thereto the following:

"The center teachers will certify mastery of each performance objective by the student. The date of mastery will be noted on the back of the record form. The Evaluation Contractor may periodically and without announcement, test a sample of students in each center to determine and verify that a student has successfully achieved the objective certified by the center teacher. For this purpose the Evaluation Contractor will use the test items given to it by the Contractor. The Evaluation Contractor will test those objectives achieved by the student within the three-week period immediately preceding the date of such test. Certain performance objectives will be verified by the Evaluation Contractor conducting interviews of the students.

A record of each student's achievement on the interim performance objective shall be kept by the Evaluation Contractor which record shall be signed and certified by an appropriate designee. The record will be available for inspection by the Contractor."

Section 4.05 is hereby amended by adding thereto, following the first sentence of the section which ends with the words "of these events", the words "and these dates".

Section 4.05 is further amended by deleting paragraph (c) thereof ending with the words "Interim Test #4" and substituting therefor the following dates: "December 18, 1970; February 5, 1971; April 2, 1971; and May 28, 1971."

Norfolk Public Schools
Commonwealth of Virginia

By /s/
P. H. Smith
Authorized Official

Learning Research Associates, Inc.

By /s/
Lee D. Brown
President

Concurrence /s/
Charles A. Woodbury, Jr.
Authorized Official

University of Virginia
Bureau of Research
School of Education

TEXARKANA-DORSETT CONTRACT, 1969

SUBCONTRACT BETWEEN THE LEA FOR THE TEXARKANA DROPOUT PREVENTION PROGRAM AND DORSETT EDUCATIONAL SYSTEMS, INC.

Purpose

This subcontract is based upon the RFP dated 6-10-69, issued by the LEA, the proposal submitted by Dorsett, and a mutually agreed upon Letter of Intent. It is intended to stipulate the scope of work, responsibilities, and obligations assumed by both parties, but to the extent that further details are required to interpret matters arising under it the above documents are incorporated by reference.

I. Period of Contractual Obligation

The period of contractual obligation begins September 10, 1969 and extends until June 5, 1970.

II. Previous Obligation

The grant terms and conditions of grant # OEG-0-9-130045-3360 Project # 13-0045 between LEA, Texarkana, Arkansas School District # 7 and the U.S. Office of Education are incorporated herein by reference and made a part of this contract.

III. General Scope of Work Assumed by Dorsett

Dorsett agrees:

- a. to organize and operate the instructional component of the first phase of the Texarkana Dropout Prevention Program.
- b. to provide instruction in basic reading, math and study skills to a minimum of 200 students. The study skills may be measured by inference of the achievement in math and reading areas.
- c. to hire and train local personnel, if possible these people will come from the target area, as para-professionals in the operation of the

instructional program.

d. to utilize at least 20 teachers and administrators from the participating school systems who will work part-time in the instructional program and will facilitate the contemplated transfer of the Dorsett material to the Texarkana Rapid Learning Centers. Their firsthand knowledge of the nature and extent of academic problems unique to the Texarkana schools will be useful to the contractor.

e. to operate centers at locations mutually agreeable to the parties.

IV. Selection of Students

a. All students who participate in this instructional program will have grade level deficiencies, in reading and math, of 2.0 or more as determined by the Iowa Test of Basic Skills or the SRA Tests. Further, all of these students will have no less than the minimum Intelligence Quotient, as determined by Lorge Thorndike and SRA Ability Quotient, of a regularly enrolled student as required by the two school districts, seventy in Texas and seventy-five in Arkansas, by the Project Management Office or its delegated representative.

b. All students who participate in the first phase of this instructional program will come from grades 7-12 in the regular school system.

c. The makeup of the first 200 students will consist of approximately equal numbers of volunteers, students assigned by counselors, and students randomly selected from those with a grade level deficiency of 2.0 or more.

d. The makeup of any group of students beyond the initial 200 will be similar to that of the first 200, or will have characteristics determined by the LEA and stipulated by the reference material. (RFP, Dorsett's proposal, and the Letter of Intent.)

V. Testing

a. The entry status for each student will be determined by the most recent test. The Texarkana, Arkansas school system used ITBS Form 3 and the Liberty Eylau school district used SRA Achievement Series Form D. These tests were given the first week of October, 1969. In all cases the tests were given on a group basis and the counselors in the individual schools administered the tests. The same conditions will exist for the post-test as was the case in the pre-test.

b. The parties agree that Dorsett will have the option to ask for re-testing or adjustment to entry level standing determined by pre-tests where its diagnostic test shows a substantial difference and that the pre-test may have been insensitive to the actual grade level deficiency when the deficiency is 2.0 grade levels or more. Diagnostic tests given by Dorsett should be administered under conditions similar to that of the initial pre-test. Further, Dorsett will notify the LEA as to what diagnostic test will be used and will allow observation of the testing by the Project Manager or the Internal Evaluator. The negotiation of the interpretation of these tests will be handled by Dorsett's representative and the Project Manager with the help of the Internal Evaluator. Final determination of whether re-test will be given will rest with the Project Manager.

c. Exit level achievement will be determined by the ITBS or SRA tests administered by a delegate of the LEA.

d. It is the responsibility of the LEA to report in writing the test results for each student to Dorsett. Results of testing conducted by Dorsett will be conveyed to the LEA in the form of written reports to be the basis for each monthly evaluation. While Dorsett may not administer tests comparable to entry or exit, national norm tests, it will continually obtain progress check tests for each subject unit. The number of such tests successfully completed by each assignee and the scores will be included in the Dorsett monthly report.

VI. Attendance of Students

a. Withdrawal from the Dropout Prevention Program may occur under the following circumstances and Dorsett will be paid on the hourly basis.

(1) Students move out of participating school districts. (2) Student is chronically truant as defined by locally applicable regulations. Regulations being that a student be present 50% of any grade marking period. (3) Student suffers prolonged period of illness. Same regulations as truancy. (4) Student is removed from program on the mutual agreement of the LEA and Dorsett. A student will be considered a legitimate withdrawal if he enrolls in the program, participates for a minimum of ten hours of instruction, and withdraws from the program for any of the above reasons. If the student is in the RLC for less than ten hours, no payment will be made to Dorsett.

b. In the event that a student withdraws from the program, the LEA will, whenever possible or practical, fill the empty slot with another student, no later than 30 days before the termination of the grant (June 5, 1970). Low academic performance will not be considered an adequate reason for withdrawal from the program until the parties to this contract mutually agree.

VII. Cost of Mobile Facilities and Refurbishing

a. Dorsett will assume the cost of providing one mobile facility during Phase I of this project to be used as an instructional center at the Texarkana Arkansas High School. Two of the four or more Rapid Learning Centers operated by Dorsett are to be refurbished rooms in existing schools. Two or more of the Rapid Learning Centers may be operated in mobile classrooms provided by Dorsett and for which a monthly rental allowance of \$95.00 per mobile classroom will be paid by the project. At any time during the contract period the LEA may purchase these mobile classrooms at Dorsett's actual cost less accumulated rental payments.

VIII. Method of Cost Reimbursement

a. In consideration for services rendered, Dorsett will be compensated on the basis of actual student successful performance, not to exceed \$135,000.00 in total and subject to reduction on failure to obtain achievements or performance.

b. The student performance differential is determined by subtracting the entering grade level achievement in math and reading from the exit

level. Entry status and exit status are based on the SRA and ITBS tests as weighted on a basis to be determined no later than February 1, 1970. This procedure will be applied to all assignees except withdrawals, and a small number of students, assigned by nonrandom procedures, to be mutually agreed by the parties to this contract, for whose learning services Dorsett will be reimbursed at the average hourly rate of other students.

c. Dorsett will be compensated on the basis of obtaining one grade level increase per subject area in eighty hours of instructional center study for \$80.00, or proportionally for each fraction thereof. For students requiring more or less than 80 hours per subject grade level increase, the payment to Dorsett per subject grade level increase will vary according to the formula $\$80.00 \times 80 \text{ hours} \div \text{actual study hours required per subject grade level increase}$. According to this formula, one grade level increase per subject area in 110 hours of instruction would cost \$58.18. Both parties agree that \$106.67 for 60 hours represents the upper limit of the cost reimbursement formula and that if over 110 hours of instruction are required, the payment for a grade level increase will be reduced by \$1.00 per hour for every hour over 110. This payment schedule will result in no payment to the contractor if 168 or more hours are required for one grade level achievement.

d. Monthly progress payments may be made to Dorsett for reimbursement of not more than an estimated 85% of direct and indirect costs incurred by Dorsett for its operations, provided further that the payments do not exceed the estimated accruals to Dorsett for grade level gains, based on sampling tests or progress check tests, in the professional judgment of the Project Director. It is noted that repeated testing with the same or similar test instruments used for final audit on student disassignment would contaminate the validity of results, so different tests must be used for interim evaluation.

IX. Availability and Cost of Capital Equipment

a. Dorsett agrees to sell 95 units of the Dorsett M86 Teaching Machines at a unit price of \$200.00 for a total of \$19,000.00. All equipment will carry standard warranty. In the event that the contractor fails to achieve substantial gains in the program Dorsett will repurchase the equipment at full price.

b. During the period of this contract, Dorsett is responsible for the full maintenance and upkeep of the Dorsett manufactured equipment. In accordance to the standard one year warranty, repairs will be made on a 24 hours basis or another M86 machine will take its place. An adequate amount of supplies and parts for the M86 will be available. The training of local personnel for maintenance of the M86 will also be part of the program.

X. Use of Consultants Listed in the Dorsett Proposal

It is understood that all key consultants or persons of similar status and staff members listed in the Contractor Proposal will be used on a working level, including site visits. Deletion or addition of consul-

tants must be mutually agreed upon by both parties. The LEA must be satisfied as to the active participation of those consultants used by the Contractor. Dr. James L. Evans will be an active and frequent contributor to this program.

XI. Availability of Instructional Materials

- a. Materials to be used in this instructional program will substantially duplicate that listed in the Dorsett Proposal.
- b. Dorsett will provide materials for medium and high achieving students and will have such material available at the instructional centers for testing with a sample population no later than April 30, 1970.

XII. Community and Public Relations

- a. The LEA is responsible for informing parents, instructional center employees, and students about testing procedures, scheduling, dismissal, and progress reports.
- b. All official press releases concerning this program should originate from LEA.

XIII. Review of Contract

The parties agree that from time to time the LEA may review progress on the program and ask for contract amendments if reasonably anticipated progress is not being obtained.

XIV. Applicable Statutes

In case of conflict arising under this contract the laws of the State of Arkansas will prevail. Unless otherwise stipulated, parties will be bound by the request for proposal and the proposal of the Contractor.

XV. Officials Not to Benefit

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

XVI. Covenant Against Contingent Fees

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the Fiscal Agent shall have the right to annul this contract without liability or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage,

brokerage, or contingent fee.

XVII. Equal Employment Opportunity

(Section 202, Executive Order 11246, September 24, 1965, 30 FR 11269)

"During the performance of this contract, the Contractor agrees as follows:"

"(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

"(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

"(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

"(4) The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

"(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

"(6) In the event of the contractor's noncompliance with the non-discrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures author-

ized in Executive Order No. 11246 of September 24, 1965 and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

"(7) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontract or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interest of the United States."

XVIII. Certification of Non-Segregated Facilities

The contractor or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control, where segregated facilities are maintained. The contractor or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity Clause; that he will retain such certifications in his files; and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

XIX. Notice to Prospective Subcontractors of Requirement for Certifications of Nonsegregated Facilities

A Certification of Non-Segregated Facilities, as required by the May 9,

1967, order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000.00 which is not exempt from the provisions of the Equal Opportunity Clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Edward D. Trice, Fiscal Agent

Loyd Dorsett, President
Dorsett Educational Systems, Inc.

TEXARKANA-EDL CONTRACT, 1970

**CONTRACT
BETWEEN THE
TEXARKANA SCHOOL DISTRICT #7**

and

**EDUCATIONAL DEVELOPMENTAL LABORATORIES, INC.
A DIVISION OF MCGRAW-HILL**

THIS CONTRACT, made and entered into this 18th day of September, 1970, by and between the Texarkana School District #7, a public school District organized and existing under the laws of the State of Arkansas, with principal offices located at 1500 Jefferson Avenue, Texarkana, Arkansas 75501 (hereinafter called LEA), and the JOINT VENTURE comprised of EDUCATIONAL DEVELOPMENTAL LABORATORIES, INC., a Division of McGraw-Hill, a private corporation organized and existing under the laws of the State of New York with principal offices located in Huntington, New York, (hereinafter referred to as the Contractor), and Arkansas School Service, Inc., a private corporation (a franchised dealer of EDL/McGraw-Hill) organized and existing under the laws of the State of Arkansas with principal offices located at 1911 Thayer Street, P.O. Box 2901, Little Rock, Arkansas 72203, and Texas Educational Aids, a private corporation (a franchised dealer of EDL/McGraw-Hill) organized and existing under the laws of the State of Texas with principal offices located at 120 East Elm, Tyler, Texas 75701. This contract is based upon the Texarkana School District #7, Arkansas, RPP #2 and the continuation proposal financed by U.S. Office of Education administered ESEA Title VIII grant number OEO-0-9-130045-3300281), the Proposal submitted by EDL August 13, 1970, and Addendum September 15, 1970, and documented negotiated details September 24, 1970, and is incorporated by reference and made part, hereof.

It is intended to stipulate the scope of work, responsibilities, and obligations assumed by both parties. If further details are required to interpret matters arising under it, the above documents and

all controlling local state, and federal laws and regulations and their issues are incorporated in this contract by reference. In instances of conflicts within and between said incorporated documents, resolution will follow, in descending order of authority: (1) Federal laws, regulations, and their issues; (2) State laws, regulations, and their issues; (3) Local laws, regulations, and their issues and (4) Mutual convenience of the contractual parties.

Performance under this contract shall commence September 28, 1970 and terminate June 30, 1971.

OPTION TO RENEW

- A. By April 1, 1971 the Contractor will submit in six copies a detailed statement of work planned to be accomplished during the next program year and six copies of a detailed P.P.B.S. budget to support this plan.
- B. The LEA will provide written notice to the Contractor by June 21, 1971, based on the meeting and agreement reached by the combined school boards at their June 15, 1971, meeting of their option to review the program for the subsequent year.

I. SCOPE OF WORK

The long-range goals of the Texarkana Dropout Prevention Program are:

- 1. To significantly reduce the percentage of dropouts in the Texarkana and Liberty-Eylau school districts.
- 2. To increase academic achievement and skill development of students who are educationally deficient.
- 3. To increase the cost effectiveness of the instructional program in the Texarkana and Liberty-Eylau school districts.

II. DUTIES OF CONTRACTOR

Using the existing facilities, the Contractor shall establish and operate a teacher support program at a minimum of one learning center located at each of the following schools: College Hill Junior High School; Jefferson Avenue Junior High School; Arkansas Senior High School; Liberty-Eylau Junior High School; and Liberty-Eylau Senior High School.

III. RESPONSIBILITIES OF CONTRACTOR

- 1. The Contractor agrees to provide an instructional learning system appropriate to the individual needs of the target population.

2. Whenever appropriate, the Contractor agrees to make maximum use of LEA facilities and equipment resources located at the school sites, i.e., mobile units, furnishings, desks, etc.
3. The Contractor agrees to purchase, assemble, install, and maintain all Contractor-owned equipment which will be utilized during the school year at his costs.
4. The Contractor agrees to apply all rental costs to the purchase of any equipment and material on lease at the price quoted in the Contractor's 1971 published catalog. The LEA will have the option to exercise its rights under the contract at any time prior to June 30, 1971, for all equipment and materials used during the 1970-1971 school year. The Contractor agrees to conduct program operations for students in the late afternoon or early evening. The additional cost to LEA for operating these evening centers shall not exceed the established costs for the operation of regular learning centers for similar students.
5. The Contractor agrees to conduct his operational program within the constraints of, and in accordance with, the intent and conditions of the evaluation design.
6. The Contractor agrees to obtain the approval of the LEA in employing all instructional personnel used in the project. Whenever possible, personnel will be employed from the local community.
7. The Contractor agrees to train and monitor all personnel employed to operate the instructional program in the learning centers.
8. The Contractor agrees to provide a list of performance objectives for his instructional program in reading and mathematics. The objectives must stipulate the individual student achievement level required, and the cycle and level of instruction for which these objectives are appropriate. (See Section VIII, Item 2, Page 7.)
9. The Contractor agrees to submit a student attendance record daily, and report to the project director at the time a student drops out of the program.
10. The Contractor agrees to report the instructional system cost for implementation, and projections to the project director on April 1, 1971 as set forth in Exhibit B.
11. The Contractor agrees to indemnify the LEA from any liability for damage to the Contractor-owned property.

12. The Contractor agrees to the responsibilities outlined in the proposal and addendum and RFP as identified but not specifically included in this contract.
13. The Contractor agrees to instruct all personnel employed to operate the instructional program in the Rapid Learning Centers that if they are party to information relative to the standardized test being employed by the LEA's internal evaluator to determine the guarantee performance level of the Contractor, the individual who has learned this information shall be immediately responsible for reporting such facts in writing to his project director.

IV. RESPONSIBILITIES OF LEA

1. The LEA agrees to schedule and initially provide to the Contractor no more than 300 students with an IQ of 75 or higher as measured by a locally administered intelligence test fulfilling the following entry criteria: (a) students in the 1969-70 Rapid Learning Center (Phase I) program who did not gain one or more grade levels in reading comprehension or mathematics (b) seventh-grade students who are two or more grade levels deficient in reading and/or mathematics, and (c) students in grades 8-12 who are two or more grade levels deficient in reading and/or mathematics. If any question exists regarding the entry level of an individual student, the case must be referred within fifteen student class days in the project according to a negotiation procedure agreed upon by the LEA and the Contractor. Within fifteen days following referral of an individual, a meeting must be scheduled between the project director and the component manager at which time disposition of the individual case will be made.
2. The LEA will be responsible for ensuring that any RLC student enrolled and in attendance for that particular day will attend the specific component classes operated by the Contractor. It will be the responsibility of the LEA to ensure that RLC students attend regular school classes to the greatest extent possible. Specific after-school program operating hours will be established to allow RLC students who have been absent to complete the work they have missed.
3. The LEA agrees to make the RLC student available to the Contractor for a maximum of 140 days prior to the final post-test. If, in fact, fewer than 140 days of instruction are scheduled during the period of the project for whatever reason (other than fault of the Contractor), the performance guarantee will be reduced proportionate to the number of days of instruction. (Example: 120 days of instruction: Guaranteed performance level would be 120/140, or 6/7, of the original level.)

4. The LEA through its internal evaluator will be responsible for supervising the administration and scoring of the tests; and continued review and analysis of all materials used by the Contractor in the program.
5. The LEA agrees to schedule RLC students to the Contractor for 45 to 55 minutes per day per subject matter area in which the student is enrolled.
6. The LEA agrees to provide office space for Contractor's on-site component manager. Other operational expenses such as secretarial help, supplies, equipment, etc., shall be the responsibility of the Contractor.
7. The LEA agrees to appropriately maintain all space to be used by the Contractor in the instructional program.

V. PERFORMANCE REQUIRED OF CONTRACTOR

1. The Contractor guarantees that each student in the program will increase his achievement in reading and/or mathematics by 1.0 to 1.9 grade levels.
2. The Contractor guarantees that each student will successfully pass 75% of the terminal criterion-reference items.
3. The Contractor agrees that he shall be responsible for all dropouts from the RLC following the initial two weeks of operation. The definition of a program dropout is found in Section VI of this contract.
4. The Contractor shall guarantee that the operating costs of the proposed instructional system will decrease as a result of increased student enrollment, or through efficiencies when applied to a target population prescribed during the performance of this contract.
5. The Contractor's instructional system utilized during the school year 1970-71 Phase II will be guaranteed to maintain the cost-effectiveness level demonstrated during the 1970-71 Phase II school year if the LEA adopts and incorporates it under the same leasing conditions into grades 7-12 in the regular school system during the school year 1971-72 Phase III. This guarantee applies only if the LEA utilizes the Contractor's complete program, operant under the same conditions as obtained throughout school year 1970-71 Phase II.
6. The Contractor agrees to train to his standards a minimum of ten mathematics teachers, ten English teachers, and two equipment maintenance persons from the participating school district's personnel to operate the learning center turnkey

program for Phase II (1971-72). The LEA shall select the teachers to be trained. The Contractor will provide information on teacher training cost.

7. The internal evaluator shall, during the period two weeks prior to the post-test, make a quality control check of the instructional materials in use in the program to determine whether the Contractor has fulfilled the requirements listed in Exhibit A. Should the quality control check indicate drilling of exposed items during the two-week period immediately prior to post-testing, the Contractor shall be liable for the cost of a complete comparison analysis of all instructional "bits" used in the two-week period with all test items, and in addition shall be penalized \$1,000.00 for each exposed item.
8. The Contractor shall not include in any of his instructional materials any exercises that are the same as the items used in the tests that will be used to determine how much the Contractor will be paid. The definition of "same" would be determined by the rules in Exhibit A. These rules apply only to instructional materials that have been copyrighted since the inception of Phase II.

VI. METHOD OF MEASURING PERFORMANCE

A. DEFINITIONS

The following definitions shall apply in the program:

1. A student will be considered a dropout from the program if he or she leaves school or the program and does not reenter within thirty days. Exceptions to this definition are: (a) if a student is drafted into military service (b) if a student is physically or mentally incapacitated to such an extent that he or she is not able to participate in the project and attend school as certified by a licensed physician, or (c) other reasons mutually agreed upon by the project director and the Contractor.
2. The starting time for each RLC student will be the first day the student enters the program. Any exception to this procedure must be agreed upon by the project director and the Contractor, and any such agreement must be made in writing.
3. The ending time for the instructional program for each student shall be the date when the final standardized test is administered to the student. If the student takes the January and May 1971 standardized tests, the latter date shall be considered the ending date. Exiting of students who have demonstrated exceptional achievement will be by

the mutual agreement of the project director and the EDL component manager.

4. Actual instructional time is the net instructional time spent in the program.
5. Students attending RLC's will be referred to herein as student.

VII. BASIS OF PAYMENT

1. Determination of total payment to the Contractor will be based on the (a) achievement gain made by each student on the standardized tests, and (b) extent to which each student achieves the final criterion-reference measure.
2. Seventy-five (75%) per cent of total payment will be based on the results of the standardized tests, and twenty-five (25%) per cent of total payment will be based on the results of student achievement on final criterion-reference measure.
3. Total maximum project costs of \$65,788.00 are to be distributed as follows:

Fifty (50%) per cent of the Fixed Charge, \$19,506.00, will be paid the Contractor at the signing of the contract; and the remaining fifty (50%) per cent, \$19,506.00, will be paid the Contractor on or before December 1, 1970. Final payment in the amount of \$26,776.00 will be made to the Contractor subject to adjustment downward based on performance and the conditions set forth under Section V. Item 7, above, and Section IX, below, on or before June 30, 1971.

VIII. PROCEDURES

1. Standardized tests used to measure performance will be selected by the project director, and approved by the internal evaluators from the nationally standardized tests generally available to the school market. The project director will have authority over all pre- and post-testing conditions, and will adhere to standard testing procedures and scoring practices as defined by the test publisher. He will determine when the tests will be given, and which forms of the selected tests will be given to individual students. The Contractor will not be told what test or what forms of the test have been or will be used for each student.
2. The Contractor must submit to the project director a pool of criterion-referenced test items. At least five (5) times the number of behavioral objectives inherent in the

structure of the system to be used must be submitted and approved by the internal evaluator thirty (30) days after initiation of the program.

IX. FORMULA FOR PAYMENT

A. Student Point

A student point is a unit of measure in the amount of \$26,776.00 divided by the total point value for the number of assigned students. Each student will be assigned 4 points for mathematics and/or 4 points for reading.

Four points were selected in order to facilitate the computation for each student in each subject area on the basis of 75% payment (3 points) for norm reference tests and 25% payment (1 point) for criterion reference tests.

B. Computation of Contractor Performance Payment

1. Ranges of growth per student for point assignment

Penalty:

Up to and including .9 years growth (math)	3 penalty pts.
Less than 75% achievement on final criterion-referenced measure (math)	1 penalty pts.
Up to and including .9 years growth (reading)	3 penalty pts.
Less than 75% achievement on final criterion-referenced measure (reading)	1 penalty pts.

Achievement Guarantee:

1.0 to 1.9 years growth (math)	No assignment of pts.
Satisfactory achievement on final criterion-referenced measure (math)	No assignment of pts.
1.0 to 1.9 years growth (reading)	No assignment of pts.
Satisfactory achievement on final criterion-referenced measure (reading)	No assignment of pts.

Bonus:

2.0 or greater years growth (math)	3 bonus pts.
85% or greater achievement on criterion-referenced (math)	1 bonus pts.

2.0 or greater years growth (reading)	3 bonus pts.
85% or greater achievement on criterion-referenced measure (reading)	1 bonus pts.

2. Computation for final payment

Following point assignment for all students, the balance (bonus points minus penalty points) will be used to determine final payment to Contractor.

Penalty:

\$26,775.00 - (Student point value x penalty pt. bal.)

Achievement Guarantee:

\$26,775.00 - (No penalty/no bonus)

Bonus:

\$26,775.00 + \$1.00 - (Contractor agreed acceptance for bonus condition, regardless of number of bonus points earned.)

C. Payment Related to Student Withdrawal for Cause

If the student leaves the project for cause, the Contractor will receive cost reimbursement of the \$26,776.00 held in escrow based upon a linear proration of Contractor's costs up to the time of the student's departure. The Contractor's reimbursement for the existing student's final performance and his or her performance on any interim performance objectives that have not been tested will be based upon a proration of the mean gain of the student's class, up to the time of the student's departure.

X. TEACHER TRAINING

Teacher training for the project will be conducted by EDL personnel. The teaching staff will be selected from the LEA district for training and continued teaching activities within the learning center. Five lab directors and five paraprofessionals will be selected for training, with final approval of the Contractor and the LEA. They will be scheduled for a five-day, forty-hour training period prior to installation of the systems. Additional teachers will be selected and trained concurrently to provide a corpus of trained specialists who will be able to continue the instructional program if any staff members are unable to complete the year due to extended illness

or normal teacher attrition. The Contractor agrees to train 20 additional district staff members in the operation of the system. The intent here is to form a nucleus of trained professionals within the Texarkana districts who can be used as resource teachers or staff development consultants during subsequent phases of the Texarkana Dropout Prevention Program. The initial training period will consist of five consecutive days. Training will include the component manager, all lab-directors, and all paraprofessionals and resource consultants (staff members to be trained). The training schedule (See Appendix B, Contractor Proposal) will be adhered to during the five-day initial training period. Twenty hours of on-going in-service training sessions or visitations will be conducted by EDL or authorized representatives. The resource consultants will act as consultants to lab directors as required, and will assume responsibility for assisting EDL teacher training personnel during ongoing in-service training sessions.

XI. TEACHER ADMINISTRATION POLICY

The success of the LEA program depends on the willingness and ability of the teachers assigned to the program to use the methodology. If a personnel situation develops in which it appears that a teacher may not be serving the best interest of the LEA program as mutually concluded by the component manager and the project director, the project director shall consider the replacement of such teacher.

XII. DISSEMINATION POLICY

Dissemination of information pertaining to planning, negotiation procedures, and interim activities related to the project will be mutually agreed on by project director and Contractor prior to its release to the public.

All information pertaining to evaluation or test results may be disseminated only by the project director. Subsequent to public release of data and information and/or following completion of the present contract, the Contractor will have the right to prepare and distribute evaluation reports, based on released data, and to distribute reprints of this evaluation to interested parties.

XIII. VISITATIONS

Visitation privileges will be extended at the discretion of and with mutual agreement between the project director and the Contractor. Specified times and sites for visitation will be established, and made available upon request to potential visitors.

XIV. SUCCESSORS AND ASSIGNEES

All terms, conditions, and provisions hereof shall inure to and shall bind the parties hereto, their, and each of their respective heirs, executors, administrators, successors and assignees. Contractor shall not subcontract, assign, mortgage, encumber or otherwise transfer any interest in this agreement.

XV. COVENANT AGAINST CONTINGENT FEES

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fees, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the LEA will have the right to annul this contract without liability or any discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of said commission, percentage, brokerage, or contingent fee.

XVI. EQUAL EMPLOYMENT OPPORTUNITY (Section 202, Executive Order 11246, September 24, 1965, 30FR 11269)

"During the performance of this contract the Contractor agrees as follows:"

1. "The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Contractor will take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not to be limited to the following:

Employment, upgrading, demotion, or transfer, recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this non-discrimination clause."

2. "The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin."
3. "The Contractor will send to each labor union or representative of workers with which he has a collective bargaining

agreement or other contracts or understanding, a notice, to be provided by the agency contracting officer advertising the labor union or workers representative of the Contractor's commitments of Section 202 of Executive Order #11246 of September 24, 1965, and shall post copy of the notice in conspicuous places available to employees and applicants for employment."

4. "The Contractor will comply with all provisions of Executive order #12246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor."
5. "The Contractor will furnish all information and reports required by Executive Order #12246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts between contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders."
6. "In the event of the Contractor's non-compliance with the non-discrimination clauses of his contract or with any of such rules, regulations, or orders, his contract may be cancelled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order #12246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order #12246 of September 24, 1965, or by rules, regulation or order of the Secretary of Labor or as otherwise provided by law."
7. "The Contractor will include the provision of #137 in every subcontractor purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order #12246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as a contracting agency may direct as a means of enforcing such provisions including sanctions for non-compliance: provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interest of the United States."

XVII. CERTIFICATION OF NON-SEGREGATED FACILITIES

The Contractor or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at

any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control, where segregated facilities are maintained. The Contractor or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification the term "segregation facilities" means waiting rooms, work areas, rest rooms and wash rooms, and restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause; that he will retain such certifications in his files; and that he will forward the following notice of such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

XVIII. NOTICE TO PROSPECTIVE SUBCONTRACTORS OR REQUIREMENT FOR CERTIFICATIONS OF NON-SEGREGATED FACILITIES

A certification of non-segregated facilities, as required by the May 9, 1967, Order (32 FR 7439, May 19, 1967) on elimination of segregated facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontractor or for all subcontracts during a period (i.e., quarterly, semi-annually, or annually).

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

IN WITNESS WHEREOF, the parties have caused this agreement to be signed in their behalf by the duly authorized representatives on the day and year first written above.

CONTRACTOR

LEA

Edmund Zazzera
President
EDL/McGraw-Hill

Notarized Certifications:

GARY-BRL CONTRACT

AGREEMENT

THIS AGREEMENT, entered into this 22nd day of September, 1970, between BEHAVIORAL RESEARCH LABORATORIES, a California corporation (hereinafter called "BRL"), and the SCHOOL CITY OF GARY, INDIANA, acting by and through the BOARD OF SCHOOL TRUSTEES OF THE SCHOOL CITY OF GARY, INDIANA (hereinafter referred to as the "BOARD").

WITNESSETH:

WHEREAS, The Board has determined that it must implement a more effective and efficient educational program for those students under its jurisdiction who are achieving basic learning skills far below their capacities, that such program must foster more positive attitudes and a greater motivation for learning in such students and that the Board accordingly has instituted and is implementing a Right to Learn Program, consisting of (I) programs based on educational priorities, (II) staff development, and (III) community involvement; and

WHEREAS, as part of such Program, the Board is establishing an inner city public elementary school, housing grades kindergarten through six (The "Curriculum Center School"), organized around curriculum centers, providing for a minimum of 700 students and permitting each student to learn in a given subject area at his optimum speed with maximum attainment, and

WHEREAS, it is necessary in implementing such Program to retain a private firm skilled in such area to act as consultants to assist in establishing a school thus organized, under the supervision and control of the Board, such firm to use its best efforts to recommend plans and assist in their implementation to raise the achievement levels of underachieving students in such school up to or above national norms in basic skills while at the same time improving the ability and working conditions of teachers without increasing the cost of education; and

WHEREAS, BRL is engaged in the development, marketing and implementation of educational systems and the distribution of supplemental programmed instructional materials and has submitted a proposal for consultation and guidance in implementing such Program and establishing such Curriculum Center School; and

WHEREAS, the parties recognize that under Indiana Law the responsibility to provide and supervise the educational program and courses of study for the children in the School City of Gary is vested in the Board of School Trustees, establishing procedures and policy and acting through its designated employees (such Board, thus acting, being referred to as the "Board"); and

WHEREAS, The Board has determined that currently underachieving children are possessed of the necessary learning ability and will reach their proper learning level when educational methods are devised to develop their learning potential, and that new approaches directed toward such students must be considered as means to bring such students up to or above national norms, and

WHEREAS, the policy of the Board must be implemented solely through and in accordance with applicable Indiana statutes and duly adopted regulations ("Indiana Law") relating among other things to curriculum, licensing of teachers, and purchase of supplies;

NOW THEREFORE, in consideration of the premises and the mutual covenants herein contained, the parties hereto hereby agree as follows:

1. Employment

The Board hereby retains BRL, and BRL hereby agrees, to provide the services on the terms and conditions herein set forth for a period of four (4) years commencing July 1, 1970, and terminating on July 1, 1974, unless sooner terminated as provided in paragraph 19.

2. Nature of Services

(A) Planning, Organization and Staffing of Curriculum Center

Prior to the beginning of the 1970-71 school year, BRL, as hereinafter more particularly set forth, shall develop plans for organizing and staffing the Curriculum Center School for a minimum of 700 students to be created at Banneker Elementary School in Gary, Indiana (the "Center"). BRL, in all matters under supervision and control of the Board, shall:

(1) Develop a curriculum in accordance with Indiana Law and regulations and with any additional standards adopted by the Board;

(2) Meet with teacher, parent and community groups and conduct workshops and discussions with respect to administration, organization and curriculum development;

(3) Conduct at least four community meetings in order to provide further information, determine parents' views and enlist support for the Center;

(4) Conduct a training and development program for staff and community members in respect to the objective, philosophy and methods of student centered instruction, differentiated staffing, non-graded curriculum and other techniques that will be used in the Center;

(5) Establish curriculum objectives, physical and organizational arrangements of the Center, staffing assignments and patterns, and procedures for maintaining individual student profiles;

(6) Arrange, with the Board's administrative staff, for the provision of instructional materials, supplies and equipment to be used in the Center, subject to applicable Indiana Law;

(7) Direct intensive pre-service training for staff, orienting the staff to the individualized student-centered approach to be used in the Center, including role-playing sensitivity training, and individual interview techniques;

(8) Provide, subject to applicable Indiana Law and working with the Board's administrative staff, manuals, films, video and audio tape equipment, and other materials required for staff development programs;

(9) Prepare a yearly calendar of activities connected with the Center, including staff development programs, parent information and participation activities and a series of opportunities for other members of the Gary School community to observe and work in the Center.

(B) Curriculum Center

Commencing with the 1970-71 school year and continuing through the 1973-74 school year, BRL, under the supervision and control of the Board, shall plan the operation of the Center, using its best efforts in such plan to raise the achievement levels up to or above national norms in basic skills. The 1973-74 school year, unless otherwise determined by the Board, shall be a transition period in which BRL's participation in the Center planning will be phased out in an orderly manner. Specifically, but not by way of limitation, BRL shall in each school year perform the following services:

(1) Designate all instructional materials, equipment and supplies, subject to Board approval and in accordance with Indiana Law;

(2) Use its best efforts to establish a system to promote maximum student achievement in language arts and mathematics; utilizing appropriate techniques of instruction, such as student-centered instruction, differentiated staffing; and non-graded curriculum;

(3) Carry on intensive staff development and in-service training with both professional and teacher personnel, utilizing latest techniques of staff development and emphasizing methods of formulating and achieving behavioral objectives, increasing achievement, and motivation of students and staff; improving work relations with colleagues and parents; and training personnel in the methods and objectives of the Curriculum Center so that the Board may use such employees to operate the Curriculum Center after BRL has been phased out of the program during the fourth year of this agreement;

(4) Diagnose, prescribe, monitor, and help implement an individualized educational program for each child;

(5) Present detailed plans for organizing instructional activities around a number of learning centers to which children will go to develop particular skills, with school staff members specializing in work at that center and at the direction of the Board assist in implementing such plans;

(6) Present detailed plans and implement detailed procedures to use individualized instructional materials so that the children progress at their own rates of speed, moving in and out of learning centers according to schedules set up in consultation with school staff members; and at the discretion of the Board and, in accordance with Indiana Law, assist in implementing such policy;

(7) Prepare plans for directing the organization and control aspects of the Center, including arranging monthly evaluation of each child's progress and the transmission of this information to the instructional personnel, arranging supervision of attendance and discipline and establishing procedures that will seek to free instructional personnel from clerical and recordkeeping duties;

(8) In cooperation with the Gary School Service Center, assist in maintaining all records and provide all information required by law;

(9) Make provisions, working with the Board's administrative staff, to provide clerical, health, and day-to-day custodial services of a quality at least equal to that provided in the other elementary schools in the School City. These services shall be purchased from School City or contractors approved by School City. The exterior and interior maintenance and repair of the Center shall be performed by the Board;

(10) Cooperate with School City in affording other

School City teachers opportunities to visit and work in the Center as part of a city-wide staff development program;

(11) Use its best efforts to implement an effective and meaningful community participation program, sending brochures and newsletters to parents explaining the activities of the Center, disseminating news about the Center to local and other media where the Board or its administrative staff deems it desirable or necessary to the program, and providing parents with special materials to assist their children at home so as to stimulate learning and achievement.

3. Staff

BRL shall make recommendations for the selection of the staff of Banneker Elementary School by the Board which it is contemplated shall (based upon an assumed enrollment of 800 students) consist of (i) a Center manager who will cooperate in directing the organization and non-academic affairs of the school and recommend selection of the learning director; (ii) the learning director who shall have the status of a principal and who will, subject to control of the Board, select the curriculum manager; (iii) five curriculum managers, duly licensed as teachers, each in the area of reading and language arts, mathematics, social studies and foreign languages, science and enrichment (arts and crafts, music, drama and physical education). The curriculum managers, together with the learning director, will supervise choice of specific approaches and materials, and select the assistant curriculum managers; (iv) fifteen teachers serving as assistant curriculum managers who will direct learning supervisors and who will be licensed or provisionally licensed in accordance with Indiana Law; (v) twenty learning assistants who will be teachers' aides and who will, to the extent practicable, be chosen from parents of children attending Banneker; (vi) three School City custodians; and (vii) two clerical employees. The staff personnel must have such licensing and accreditation as may be required under Indiana Law; and to this end, the Board will cooperate with BRL in the assignment to the Center of qualified and certified teachers to teach in areas of reading and the language arts, mathematics, social studies and foreign languages, science and enrichment (arts and crafts, music, drama and physical education). All staff members who are School City employees shall remain such receiving compensation and related benefits from the School City of Gary. All such School City employees assigned to the Center shall remain under the supervision and control of the Board.

4. Curriculum

The curriculum of the Center shall meet all applicable standards of the State of Indiana and of the Board, and shall include (i) a science component, including basic experimentation, development and sharpening of individual powers of observation, exercises in principles of logic, environmental education, health and safety instruction; (ii) a social science program including black history, foreign languages, economics, government and society that promotes understanding of and

respect for institutions and the change of institutions by lawful means; (iii) an enrichment program, including choral and instrumental music, arts and crafts, and physical education; (iv) literature; (v) mathematics; and (vi) reading and language arts.

5. Consideration

In consideration for the services rendered pursuant to this Agreement, the School City shall pay BRL for each school year an amount equal to the annual per pupil ADA current expenditure costs, grades 1 through 12, as taken from Form 9A, Annual Financial Report of Indiana Superintendent of Public Instructions, times the active enrollment as of October 30 for Banneker School, plus any reimbursement the Board receives from Federal authorities for compensatory services BRL has, is or will provide at the Center.

The foregoing consideration shall be payable as follows:

A. 20% of the estimated amount of such consideration on September 1 of the school year.

B. 10% of the estimated amount of such consideration on the first day of the following month of the school year to and including May, less annual current expenditures paid by School City as below described:

- (a) Employee salaries.
- (b) Fringe benefits, employer retirement contributions, employer taxes, and other employer contributions.
- (c) Custodial supplies and materials.
- (d) Laundry and dry cleaning costs.
- (e) Utilities: water, electricity, fuel, telephone, etc.
- (f) Vandalism detection services.
- (g) Insurance costs.
- (h) 2% of the ADA current per pupil expenditure costs for administration, overhead, and business services.
- (i) 3.2% of the ADA current per pupil expenditure costs for maintenance.
- (j) Materials required by Indiana Law to be purchased and/or furnished to the Center by the School City.

C. Immediately following July 30 of each school year,

an adjustment shall be made so that the payments based on estimated amounts shall conform to actual amounts. Such adjustment may be made earlier as of any month-end when it is apparent that there is a disparity between anticipated or estimated and actual costs.

D. The May, 1974 final payment shall be withheld until after July 30, 1974, for final adjustment of consideration less the amount of any expenditures paid by School City as previously described for May and June, 1974.

6. Evaluation

BRL will subcontract with an independent evaluator, chosen in conjunction with the Board, the approval of the Board and BRL to the selection of such independent evaluation to be reasonably given, to make a thorough and meticulous evaluation of the program and its results and to report its findings to the Board and BRL. The Board, BRL and the evaluator will develop nationally standardized tests. In addition to standardized testing of student achievement in basic skills, the evaluator will assess the benefits of the program in other academic areas and measure progress in areas such as student, staff and parent satisfaction and motivation, response to the program among the school community; and effect on attendance and discipline.

The evaluator shall monitor the planning and organization phases of the program and administer standardized tests in September and June. The evaluator shall also assist in the preparation of measurable instructional and social objectives of the program.

The evaluator shall provide an evaluation design by September 1, 1970. Formal objective assessments will be made by the evaluator in January, 1971; June, 1971; January, 1972; June, 1972; January, 1973; and July, 1973.

BRL shall hire a second independent evaluator in September, 1970, in order to provide an independent audit of the original evaluation design. The auditing agency will also review and report on each formal objective assessment.

7. Guarantee

BRL makes the following guarantee with regard to any student enrolled in the Center for each applicable school year (a school year consisting of attendance of at least 150 days during the course thereof):

(i) Each student enrolled in the program for three (3) full consecutive years will perform at least at grade level at the end of the third year, as measured by nationally recognized tests; (ii) each student enrolled in the program for a full school year but for less than three years will each year achieve at least a year's advancement in reading and mathematics for each such year when he is enrolled,

as measured by nationally recognized tests, or in the case of any student who cannot read at the beginning of any school year, that he will score at least in the 50th percentile on a nationally recognized reading readiness test.

If a student does not achieve the results guaranteed BRL will refund the entire fee due it for each student that is attributable to the instructional phase of the program for the applicable guarantee period. For the purpose of this agreement, cost attributable to the instructional phase of the program refers to all expenditures with the exception of clerical and custodial costs.

Such guarantee shall not be operative, however, if the Board does not or cannot legally:

(A) Make facilities at Banneker Elementary School open and available at all times during the term hereof to BRL necessary to perform its services for the Center;

(B) Provide BRL, upon request, with all relevant information and data concerning the students to be enrolled in the Curriculum Center or concerning the Gary, Indiana school populace;

(C) Assure that the Center is open and available to all professionals and teachers' aides in the City of Gary for observation, training, internship, and evaluation, and to the community for community activities.

(D) Upon fifteen (15) days written notice from BRL, accept for reassignment any teacher or administrator who BRL advises is not suitable for work in the Center, or honor the written request of any staff member for reassignment from work in the Center;

(E) Substantially follow the plans, recommendations and procedures reasonably made or provided by BRL.

8. Insurance Coverage and Liability

The Board shall include the Center within the coverage of any and all its liability insurance contracts; however, this agreement shall not impose any liability or duty upon the Board for the acts, omissions, liabilities or obligations of BRL or its employees, subcontractors, or agents.

9. Modifications

The Board may from time to time request changes in the scope of the services of BRL to be performed under this Agreement. Such modifications, including any increase or decrease in the amount of BRL's compensation, which are mutually agreed upon by the parties hereto, shall be incorporated in written amendments to this Agreement.

10. Compliance with Local Statutes, Laws and Regulations

BRL shall comply with all applicable laws, ordinances and codes of state and local governments, including the rules and regulations of the Board. The Board shall within the scope of applicable laws, agreements, and regulations, cooperate with BRL and seek such modifications as may be necessary to assist BRL in carrying out its contractual requirements hereunder.

11. Progress Reports and Inspection

BRL will make progress reports and other reports as required by the Board or the Superintendent of Schools of the School City.

12. Assignability

No rights or obligations of BRL under this Agreement, including but not limited to the right to receive money pursuant to the terms above, shall be assignable without the prior written consent of the Board, except a right to receive money may be transferred or assigned by operation of law.

13. Successors and Assigns

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

14. Time is of the Essence

Time is of the essence of this Agreement.

15. Notice

Any notice or other communication required or permitted to be given hereunder shall be deemed properly given if personally delivered or deposited in the United States mail, postage prepaid, registered or certified, addressed to:

Behavioral Research Laboratories
Attn: George H. Stern
866 United Nations Plaza
New York, New York

or to the Board:

Board of School Trustees of
School City of Gary, Indiana
Attn: Superintendent of Schools
620 East 10th Place
Gary, Indiana 46402

or to such other address as may from time to time be designated in writing by the respective parties.

16. The interpretation, performance and enforcement of this Agreement shall be governed by the laws of the State of Indiana.

17. Miscellaneous

The parties hereto shall not be liable to the other or any third party for any failure to perform their respective obligations under this Agreement due to any cause not within their respective control including, but not by way of limitation, fire, strike, or Acts of God.

18. Cancellation or Termination

This Agreement may be cancelled or terminated by either party upon 120 days notice in writing by either party to the other. In such event BRL will be entitled to receive the payments provided for herein prorated to the effective date of cancellation. BRL may not, however, terminate the Agreement during the latter half of the third school year (other than termination for a breach or anticipatory breach of the Agreement by the School City) unless BRL shall have attained a success ratio equal to fifty per cent (50%) or more on the guaranteed portion of this Agreement for the prior two school years. This Agreement shall terminate immediately if this Agreement is declared illegal by a court having jurisdiction of the matter, unless the parties hereto modify the Agreement in such a manner as to cure any such illegality. In the event of such termination, BRL shall be entitled to receive from School City the portion of the consideration BRL would have been otherwise entitled to receive as of the date of such termination, less any portion which the School City would not legally have been able to otherwise expend for the materials and services provided for by BRL under this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

BEHAVIORAL RESEARCH LABORATORIES

/s/ George H. Stern, President
/s/ John A. Johnson, Secretary

BOARD OF SCHOOL TRUSTEES OF THE
SCHOOL CITY OF GARY, INDIANA

/s/ Alfonso D. Holliday II, M.D., President
/s/ Joe A. Torres, Secretary

GILROY-WLC AGREEMENT

This Agreement, dated 9 July 1970, is between (1) Gilroy Unified School District (SCHOOL), 7663 Church Street, Gilroy, California 95020, and (2) Westinghouse Learning Corporation (WLC) a Delaware Corporation with headquarters at 100 Park Avenue, New York, New York 10017.

It contains all the terms and conditions under which WLC will provide and the SCHOOL will purchase and use, the WLC Learning Center Program (PROGRAM) during the 1970-71 school year.

1. Background and Purpose

The PROGRAM has been developed by a team of psychologists, educators and systems managers during a period of several years of research and development effort. It is a program for the systematic and effective management of learning, valuable for remedial, regular, and enrichment purposes, completely individualized, and selfpaced. In operation, it has five major elements or phases:

- Diagnosis. The student's strengths and needs are identified through a variety of tests designed to establish what he already knows and what he needs to learn.
- Prescription. A course of study is planned for each student, specially designed to take advantage of his present achievements and to concentrate on the areas of his greatest need.
- Learning Materials. Each unit in the course of studies refers the student to learning materials that have been selected as being most effective or efficient for him to use in learning the content of that unit.
- Motivation. Each student participates in a system for planning and scheduling his study program; in this way, he learns to assume increasing responsibility for the objectives and the management of his own work, of his study program, and this in turn motivates him to accomplish it successfully and well.

--Evaluation. Progress tests measure the student's achievement in reaching his learning goals. These measures of achievement are used for following and aiding the student's progress. They are also the basis on which the PROGRAM is judged and paid for.

Under this agreement WLC will establish and operate a Learning Center in Gilroy to provide reading and math instruction to elementary students. The objectives of the PROGRAM are that all students enrolled in it will (a) advance at least one grade level in reading and math at the end of the fiscal year 1971 (June 30, 1971), and (b) will further progress to performance levels at or near the grade level at which they are enrolled in school.

2. Preparation

A. To prepare for the opening of the Center and for the operation of the PROGRAM, WLC will do these things:

- (1) Not later than 20 July 1970, WLC will provide the SCHOOL with a complete and detailed description of the space and furnishings required to operate the PROGRAM so that the SCHOOL will have sufficient time to make suitable space ready for the PROGRAM prior to the beginning of the school year.
- (2) WLC will assign from its staff a manager to operate the PROGRAM. It is expected that the Center will have at least two additional staff members. One of these will be a teacher assigned to the Center from the SCHOOL staff and paid by the SCHOOL. WLC will also employ one or more aides in the Center. It is understood that the number of aides on duty in the Center at any time may be adjusted according to the number of students in attendance. WLC will provide all training required for all teachers and aides who will be working in the PROGRAM.
- (3) WLC will furnish all educational equipment and all educational and motivational materials required for use in the PROGRAM. (This equipment and these materials will remain the property of WLC.)

B. To prepare for the opening of the Center and for the operation of the PROGRAM, the SCHOOL will do these things:

- (1) The SCHOOL will make available, in or near the Eliot School, suitable space for a Learning Center to accommodate up to 52 students. The space will be made ready not later than 20 August, 1970, to meet the requirements of the PROGRAM as described by WLC. The SCHOOL will also make available adequate office space in or near the Learning Center for the use of the WLC staff manager and his secretary. The SCHOOL will provide all furni-

ture, (tables, chairs, desks, etc.) for the Center and for the WLC manager's office.

- (2) The SCHOOL will select two teachers from its staff to work in the Learning Center, and the SCHOOL agrees that WLC will have an opportunity to participate in and approve of their selection. The SCHOOL will arrange for the teachers selected to be available for training at least two weeks before the start of the school year.

3. Operations

- A. WLC will operate the PROGRAM in the Center according to these terms and standards:

- (1) The PROGRAM will be ready to enroll students not later than 28 September 1970. The Center will be open and the PROGRAM will be available for students for no fewer than 5 hours a day, 5 days a week during the school year. Additional hours of operation at any time, and reduced or adjusted hours of operation during school holiday or vacation periods will be arranged by agreement between WLC and the SCHOOL.
- (2) WLC will accept for enrollment in the PROGRAM all students assigned to it by the SCHOOL. Based on test information provided for each student by the SCHOOL WLC will establish a learning objective and a program of study for each student. Each student's schedule of attendance at the Center will be arranged as far as possible so that he may be expected to accomplish his objective on schedule.
- (3) WLC may notify the SCHOOL within the first 20 hours of any student's attendance at the Learning Center that in its judgment the student cannot benefit from the PROGRAM, and in such case, after review, the student will be withdrawn from the PROGRAM. WLC expects that not more than 3% of the students will fall in this category. Any student who is withdrawn from the PROGRAM may be re-enrolled after the factors responsible for his withdrawal have been remedied.
- (4) The results of the PROGRAM will be measured by the achievement of students enrolled in it. The unit of achievement is one achievement-year, which is equal to a 1.0 gain in grade level as determined by standardized tests. WLC's performance goal, which is subject to the enrollment and attendance standards established in paragraph 3B(2) below, is that students enrolled in the PROGRAM will accomplish a total of 400 achievement-years.

- (5) WLC will arrange, in cooperation with the SCHOOL, for visitors, observers, orientation sessions, teachers workshops, and other activities relating to the operation of the PROGRAM provided only that such activities are judged not to interfere with its effective operation.
- (6) WLC will arrange with the SCHOOL to provide it with appropriate information on the progress of each student enrolled in the PROGRAM.

B. To assist with and support the operation of the PROGRAM, the SCHOOL will do these things:

- (1) The SCHOOL will select Title I participant students for enrollment in the PROGRAM during regular school hours, based on their needs for remedial instruction in mathematics and reading. Each student assigned will have an objective of achieving not less than 1.0 achievement-years in reading and math.
- (2) The SCHOOL will pre-test each student assigned to the PROGRAM in math and/or reading to establish his entry level. Only nationally standardized tests which report in grade level equivalents will be used for pre-testing. The SCHOOL will administer post-tests to each student within ten school days of being notified by WLC that the student has completed his work. The post-tests will be alternate forms of the pre-tests, and the results of the pre- and post-tests will be compared to determine a student's progress in a subject measured in achievement-years.
- (3) The SCHOOL will be responsible for the enrollment and attendance of students in the PROGRAM at standard levels which will reasonably permit them to accomplish the PROGRAM's performance goal of 400 achievement-years. To this end, the SCHOOL will:
 - (a) Enroll students for a total of not less than 355 achievement-years in the Learning Center, and
 - (b) Arrange for 103 Title I students to attend the Learning Center for 2-1/2 hours every school day. This is the equivalent of 258 student-hours per day.
 - (c) Assure WLC of a "standard minimum attendance" in the Learning Center of at least 220 student hours on not less than 170 school days during the school year. This means that the "standard minimum attendance" in the Center will be 220 student-hours per day, and that the "standard minimum school year" will be 170 days.

4. Payment

- A. The SCHOOL will pay WLC for its success in accomplishing the performance goals of the PROGRAM, and for the achievements of the students enrolled in it. The total payment to be made will be determined according to the following terms and conditions:
- (1) The standard price for an achievement-year accomplished under this contract is \$168.75, and the SCHOOL will pay WLC that price for each achievement-year accomplished by students enrolled in the PROGRAM, if the average time to accomplish an achievement-year in each subject for all students is 90 hours, or less.
 - (2) If all students in the PROGRAM average more than 90 hours per achievement-year per subject, the price of \$168.75 will be reduced proportionately. For example, an average of 99 hours represents a 10% greater time, and would result in a price for all achievement-years of \$151.87 (90% of \$168.75).
 - (3) If any student fails to accomplish at least a 1.0 achievement-year in a subject in 120 hours, the SCHOOL will pay nothing to WLC for that student's work in that subject. The student will remain in the PROGRAM, and his new pre-test score will be the score he obtained on his 120-hour test.
 - (4) If a student is enrolled with the objective of accomplishing more than a 1.0 achievement-year in a subject, his actual achievement, measured to the nearest 10th of an achievement-year, will be credited to the PROGRAM, and the equivalent fraction of the price for an achievement-year will be paid to WLC. However, the SCHOOL will in no case pay for more achievement than was established as the student's objective when he enrolled. All achievement beyond that objective by any student will be at no cost to the SCHOOL.
 - (5) When the SCHOOL has enrolled students for achievement-years having a value of \$60,000 (about 355 achievement-years), the SCHOOL may elect to enroll no further students, in which case it will owe no further payment to WLC. If the SCHOOL elects to enroll students in the PROGRAM for more than a total value of \$60,000, WLC will accept them for enrollment (provided only that there is reasonable time for them to accomplish the objective for which they are enrolled) at the price of \$168.75 per achievement-year until 400 achievement-years are accomplished, and at the price of \$75 per achievement-year for all additional enrollments to be completed through August 31, 1971.

(6) If the attendance at the Learning Center on any of the 170 days in the "standard minimum school year" is less than the "standard minimum attendance" of 220 student-hours per day, then the number of student-hours by which the attendance is less than 220 shall be considered excessive absence. Each hour of excessive absence will be considered equal to 1/90th of an achievement-year. The total number of hours of excessive absences during the year, divided by 90, will be counted as achievement-years completed, and the price for that number of achievement-years will be payable to WLC. Any hours of attendance by a student that total less than 50 in a subject, and all hours of attendance by a student for which no pre-test/post-test measurements are available will be considered hours of excessive absence for the purposes of this paragraph. WLC will cooperate with the SCHOOL in scheduling additional hours of operation of the Learning Centers to permit students to make up excessive absences and in this way to minimize the effects of this paragraph.

(7) The SCHOOL will make monthly partial progress payments to WLC on terms to be arranged.

5. It is understood that WLC will not be liable for loss, damage, detention, or delay resulting from causes beyond its reasonable control.

6. WLC will use its best efforts to perform this Agreement in a reasonably diligent manner. There are no warranties, express or implied, except as set forth in this Agreement; and the results of the Learning Center system are guaranteed specifically as described herein and in no other way. In no event shall WLC be liable for any consequential or incidental damage arising out of this Agreement or the breach thereof.

7. This Agreement is not assignable by either party without the prior written consent of the other party.

8. All notices given in connection with this Agreement shall be given in writing. If to WLC, addressed to Westinghouse Learning Corporation, 100 Park Avenue, New York, New York 10017, Attention: H. K. Skeele, Vice President, and if to SCHOOL, address to Superintendent, Gilroy Unified School District, 7663 Church Street, Gilroy, California 95020.

IN WITNESS WHEREOF the parties have hereunto set their hands on the date first above written.

GILROY PUBLIC SCHOOLS

WESTINGHOUSE LEARNING CORPORATION

BY:

(S. Robert Infelise)

BY:

(H. K. Skeele)

Superintendent

Vice President

GRAND RAPIDS-WLC CONTRACT

This Agreement, dated [15 July 1970] is between (1) Grand Rapids Public Schools (SCHOOL), 143 Bostwick N. E., Grand Rapids, Michigan 49502, and (2) Westinghouse Learning Corporation (WLC) a Delaware Corporation with headquarters at 100 Park Avenue, New York, New York 10017.

It contains all the terms and conditions under which WLC will provide, and the SCHOOL will purchase and use, the WLC Learning Center Program (PROGRAM) during the 1970-71 school year.

1. Background and Purpose

The PROGRAM has been developed by a team of psychologists, educators and systems managers during a period of several years of research and development effort. It is a program for the systematic and effective management of learning, valuable for remedial, regular, and enrichment purposes, completely individualized, and selfpaced. In operation, it has five major elements or phases:

--Diagnosis. The student's strengths and needs are identified through a variety of tests designed to establish what he already knows and what he needs to learn.

--Prescription. A course of study is planned for each student, specially designed to take advantage of his present achievements and to concentrate on the areas of his greatest need.

--Learning Materials. Each unit in the course of studies refers the student to learning materials that have been selected as being most effective or efficient for him to use in learning the content of that unit.

--Motivation. Each student participates in a system for planning and scheduling his study program; in this way, he learns to assume increasing responsibility for the objectives and the management of his own work, of his study program, and this in turn motivates him to accomplish it successfully and well.

--Evaluation. Progress tests measure the student's achievement in reaching his learning goals. These measures of achievement are used for following and aiding the student's progress. They are also the basis on which the PROGRAM is judged and paid for.

Under this agreement WLC will establish and operate two Learning Centers in Grand Rapids, one in the Lexington Elementary School and one in the Franklin Elementary School. The objective of the PROGRAM to be operated in the Centers is to provide instruction in math and reading so that students performing below grade level in these subjects will progress to performance levels at or above grade level by the end of the school year.

2. Preparation

- A. To prepare for the opening of the Centers and for the operation of the PROGRAM, WLC will do these things:
 - (1) Not later than [15 July 1970] WLC will provide the SCHOOL with a complete and detailed description of the space and furnishings required to operate the PROGRAM so that the SCHOOL will have sufficient time to make suitable space ready for the PROGRAM prior to the beginning of the school year.
 - (2) WLC will assign from its staff a manager who will have primary responsibility for the entire PROGRAM and a senior professional (who will be in charge of the second Center) to operate the PROGRAM. It is expected that each Center will have at least two additional staff members. One of these will be a teacher assigned to the Center from the SCHOOL staff and paid by the SCHOOL. WLC will also employ one or more aides in each Center. It is understood that the number of aides on duty in a Center at any time may be adjusted according to the number of students in attendance. WLC will provide all training required for all teachers and aides who will be working in the PROGRAM.
 - (3) WLC will furnish all educational equipment and all educational and motivational materials required for use in the PROGRAM. (This equipment and these materials will remain the property of WLC.)
- B. To prepare for the opening of the Centers and for the operation of the PROGRAM, the SCHOOL will do these things:
 - (1) The SCHOOL will make available in the Lexington Elementary School and the Franklin Elementary School suitable space for a Learning Center to accommodate up to 50 students. The space will be made ready not later than

20 Aug. 1970 to meet the requirements of the PROGRAM as described by WLC. The SCHOOL will also make available adequate office space in or near one of the Learning Centers for the use of the WLC staff manager and his secretary. The SCHOOL will provide all furniture (tables, chairs, desks, etc.) for the Centers and for the WLC manager's office.

- (2) The SCHOOL will select two teachers from its staff--one to work in each Learning Center, and the SCHOOL agrees that WLC will have an opportunity to participate in and approve of their selection. The SCHOOL will arrange for the teachers selected to be available for training at least two weeks before the start of the school year.

3. Operations

- A. WLC will operate the PROGRAM in the two Centers according to these terms and standards:

- (1) The PROGRAM will be ready to enroll students not later than 4 September 1970. The Centers will be open and the PROGRAM will be available for students for no fewer than 6 hours a day, 5 days each week during the school year. Additional hours of operation at any time, and reduced or adjusted hours of operation during school holiday or vacation periods will be arranged by agreement between WLC and the SCHOOL.
- (2) WLC will accept for enrollment in the PROGRAM all students assigned to it by the SCHOOL. Based on test information provided for each student by the SCHOOL, WLC will establish a learning objective and a program of study for each student. Each student's schedule of attendance at the Center will be arranged as far as possible so that he may be expected to accomplish his objective on schedule.
- (3) WLC may notify the SCHOOL within the first 20 hours of any student's attendance at the Learning Center that in its judgment the student cannot benefit from the PROGRAM, and in such case, the student will be withdrawn from the PROGRAM. WLC expects that not more than 5% of the students will fall in this category. Any student who is withdrawn from the PROGRAM may be re-enrolled after the factors responsible for his withdrawal have been remedied.
- (4) The results of the PROGRAM will be measured by the achievement of students enrolled in it. The unit of achievement is one achievement-year, which is equal to a 1.0 gain in grade level as determined by standardized tests. WLC's performance goal, which is subject to the enrollment and attendance standards established in para-

graph 3B(2) below is that students enrolled in the PROGRAM will accomplish a total of 960 achievement years.

- (5) WLC will arrange, in cooperation with the SCHOOL for visitors, observers, orientation sessions, teachers workshops, and other activities relating to the operation of the PROGRAM provided only that such activities are judged not to interfere with its effective operation.
- (6) WLC will arrange with the SCHOOL to provide it with appropriate information on the progress of each student enrolled in the PROGRAM.

B. To assist with and support the operation of the PROGRAM, the SCHOOL will do these things:

- (1) The SCHOOL will select students for enrollment in the PROGRAM based on their needs for instruction in mathematics and reading. Each student enrolled will have an objective of achieving not less than 1.0 achievement-years in one or both subjects. Students enrolled for mathematics only will be at or above their grade level in reading.
- (2) The SCHOOL will pre-test each student assigned to the PROGRAM in math and/or reading to establish his entry level. Only nationally standardized tests which report in grade level equivalents will be used for pre-testing. The SCHOOL will administer post-tests to each student within five school days of being notified by WLC that the student has completed his work. The post-tests will be alternate forms of the pre-tests, and the results of the pre-and post- tests will be compared to determine a student's progress in a subject measured in achievement-years.
- (3) The SCHOOL will be responsible for the enrollment and attendance of students in the PROGRAM at standard levels which will reasonably permit them to accomplish the PROGRAM's performance goal of 960 achievement-years. To this end, the SCHOOL will:
 - (a) Enroll students for a total of not less than 480 achievement-years in each Learning Center, or a minimum of 960 achievement-years in both Centers, and
 - (b) Arrange a "standard minimum attendance" in each Learning Center of at least 40 students (80% of the capacity of a Center) during each of the six hours of its operation on not less than 175 school days during the School year. This means that the "standard minimum school year" will be 175 days.

4. Payment

- A. The SCHOOL will pay WLC for its success in accomplishing the performance goals of the PROGRAM, and for the achievements of the students enrolled in it, according to the following terms and conditions:
- (1) The price for an achievement-year is \$149.50, and the SCHOOL will pay WLC that price for each achievement-year accomplished by students enrolled in the PROGRAM. If students accomplish the PROGRAM goal of 960 achievement-years, then the SCHOOL will pay WLC \$143,700.
 - (2) If any student fails to accomplish at least a 1.0 achievement-year in a subject in 120 hours, the SCHOOL will pay nothing to WLC for that student's work in that subject, and the price of that 1.0 achievement-year will be subtracted from the total amount to be paid to WLC by the SCHOOL.
 - (3) If a student is enrolled with the objective of accomplishing more than a 1.0 achievement-year in a subject, his actual achievement, measured to the nearest 10th of an achievement-year, will be credited to the PROGRAM, and the equivalent fraction of the price for an achievement-year will be paid to WLC. However, the SCHOOL will in no case pay for more achievement than was established as the student's objective when he enrolled. All achievement beyond that objective by any student will be at no cost to the SCHOOL.
 - (4) When the SCHOOL has enrolled students for a total of 960 achievement-years, it may elect to enroll no more students, in which case it will owe no further payment to WLC. If the SCHOOL elects to enroll students in the PROGRAM for more than a total of 960 achievement-years, WLC will accept them for enrollment provided only that there is reasonable time for them to accomplish the objective for which they are enrolled. The SCHOOL will pay WLC for all such additional enrollments to be completed through August 31, 1971 at the rate of \$75 per achievement-year.
 - (5) If the attendance at either Learning Center on any of the 175 days in the "standard minimum year" is less than the "standard minimum attendance" of 240 student-hours per day, then the number of student-hours by which the attendance is less than 240 shall be considered excessive absence. The total number of hours of excessive absences during the year, divided by the actual average number of hours in which all students enrolled in the PROGRAM

accomplish a 1.0 achievement-year, will be counted as achievement-years completed, and the price for that number of achievement-years will be payable to WLC. Any hours of attendance by a student that total less than 50 in a subject, and all hours of attendance by a student for which no pre-test/post-test measurements are available will be considered hours of excessive absence for the purposes of this paragraph. WLC will cooperate with SCHOOL in scheduling additional hours of operation of the Learning Centers to permit students to make up excessive absences and in this way to minimize the effects of this paragraph.

(6) The SCHOOL will make monthly partial progress payments WLC on terms to be arranged.

5. It is understood that either WLC or the SCHOOL will not be liable for loss, damage, detention, or delay resulting from causes beyond their reasonable control.

6. WLC will use its best efforts to perform this Agreement in a reasonably diligent manner. There are no warranties, express or implied, except as set forth in this Agreement; and the results of the Learning Center system are guaranteed specifically as described herein and in no other way. In no event shall WLC be liable for any consequential or incidental damage arising out of this Agreement or the breach thereof.

7. This Agreement is not assignable by either party without the prior written consent of the other party.

8. All notices given in connection with this Agreement shall be given in writing. If to WLC, addressed to Westinghouse Learning Corporation, 100 Park Avenue, New York, New York 10017, attention: H. K. Skeelee, Vice President, and if to SCHOOL, addressed to Superintendent, Grand Rapids Public Schools, 143 Bostwick, Northeast, Grand Rapids, Michigan 49502.

IN WITNESS WHEREOF the parties have hereunto set their hands on the date first above written.

GRAND RAPIDS PUBLIC SCHOOLS
By:

WESTINGHOUSE LEARNING CORPORATION
By:

GRAND RAPIDS-CMES CONTRACT

This Agreement made this ____ day of September, 1970, between the Board of Education of Grand Rapids, Michigan, hereinafter referred to as the District, and Combined Motivation Education Systems, Inc., hereinafter referred to as the Company.

WHEREAS, the District has been duly empowered to enter into this contract with the Company to provide reading and math improvement programs at the South Middle School, the school year commencing on the 26th day of August, 1970 and terminating on the 11th day of June, 1971; and

WHEREAS, the District is presently controlling and operating the South Middle School and is able to, and shall, furnish sufficient space within such school including all utilities, maintenance and janitorial services for the conduct of classes and other instructional services to be conducted by the Company as provided herein;

NOW, THEREFORE, in consideration of the several agreements herein contained, the District and the Company hereby agree as follows:

I. TEACHERS

A. The District shall provide a Program Director, four (4) qualified teachers and ten para-professionals who shall be assigned to the Combined Motivation Education Program.

1. The District shall have the responsibility for payment of all normal fringe benefits as well as the issue of salary checks. Said teachers and para-professionals are not now, nor will they be, loaned or borrowed employees but, in all respects, shall be employees of the District, and nothing contained herein shall be construed so as to make said teachers or para-professionals "loaned" or "borrowed" employees of the Company. Costs incurred by the District will be deducted from the payment to the Company as indicated in V.A.

2. If, at any time during the term of this contract, any or all of the teachers and/or para-professionals supplied by the District shall request, or be requested by the Company or the District, to discontinue their services under this Agreement, the District shall immediately supply the Company with a replacement for such teacher(s) or para-professional(s).
3. In the event the District shall desire the removal of a teacher, Program Manager, or para-professional from the Company's program, it shall first consult with the Company.

B. The Company shall provide all necessary instructional material and assistance for and in the conduct of its Combined Motivation Education Program, hereinafter referred to as CMEP, for the improvement of reading and mathematical levels of students placed in said program at the South Middle School.

II. STUDENT SELECTION. The District shall select a sufficient number of students to provide the equivalent of 1200 student units* who shall be placed in the CMEP to be conducted by the Company.

- A. Students shall be initially selected for this program by the District on the basis of a mutually agreed upon Standardized Achievement Test.
 1. Those students selected on this basis shall be the ones performing at the lowest level on that test, so that the total number of students shall comprise all those students at the lowest level.
- B. The Company, within the first 30 calendar days after assignment to the CMEP, shall have the right on the basis of emotional or mental reasons unrelated to the standardized test results to refuse up to, and including, ten percent (10%) of the students selected and, in the event this right is exercised, the District shall select replacements from the remaining students, excluding those so refused within five (5) school days of the date of the refusal.

* One student unit equals one student enrolled in one subject for one class period each day for one school year.

1. The District shall have the right to reject the Company's refusal to accept such students up to one-half (1/2) of the above ten percent (10%). In this event, the Company shall be paid for such students on the basis of the mean gain of CMEP students exclusive of those students refused by the Company and rejected by the District.
 2. No payment will be made for rejected students.
- C. In special cases, a student may be dropped or added to the CMEP upon mutual agreement of the Principal and the Program Director.

III. FACILITIES. The District shall provide the equipment and facilities as set out as start-up costs in Appendixes A and B to the Proposal dated July, 1970, at South Middle School during the term of this Agreement as its sole cost and expense, which equipment and facilities shall remain the property of the District.

IV. PROGRAM. The Company shall conduct its reading and math remediation program known as the CMEP at the school site during the term of the school year commencing August 26, 1970 and terminating June 11, 1971.

- A. The Company shall train four (4) teachers, as supplied by the District under the provisions of Article I, who shall be responsible for the conduct of teaching the program. Training shall be conducted at the school site beginning August 17, 1970 and ending August 28, 1970.
- B. The Company shall use its own methods and procedures of instruction in the conduct of its CMEP.
- C. The Company shall evaluate and test all students in its classes at least once every thirty (30) school day period and shall maintain daily progress records on each individual student at company expense, all of which shall be made available to the District upon request at the office of the Program Director.
- D. The Company shall provide the District with cost effectiveness information on the instructional program.
- E. The Company shall assume all costs and responsibilities for the training of the CMEP management program.

- F. The Company shall establish with South Middle School a schedule and program of transition of the system to the District.
- G. The Company shall bear all direct operational costs of the program, including salaries, consumable materials, public relations, record keeping, reporting, management and staff development.
- H. The Company shall conduct necessary programs to communicate the CMEP to the community, parents and school people.

V. SCHEDULE OF FEES

- A. The District shall pay the Company the sum of \$6.00 per student for each one-tenth (1/10) of Grade Level Increase in each student's mathematical ability and \$6.00 per student for each one-tenth (1/10) of Grade Level Increase for each student's reading ability, figured to the nearest tenth achieved by each of the students in the CMEP, but, in no event shall said sum exceed \$164,000.00 less salaries paid teachers, paraprofessionals and Program Director, and fringe benefits paid to Program Director only.
 - 1. The base (or starting point) for the grade level of each of the students for mathematics and reading shall be determined by his individual performance on the mutually agreed upon standardized test, administered at the commencement of the school year.
 - a. For the purposes of determining the true base level of those students who fail to meet "chance level" (i.e., frequency expectancy = number of distractions, multiplied by the number of items on the test), those students will be retested at the next lower level test and that shall be the student's base grade level.
 - 2. Grade Level Increase (Grade Score Increase) in mathematics and reading, shall be determined at the end of instruction at which time the mutually agreed upon standardized test shall be administered, except for those students who initially failed to meet "chance level," and they shall be tested on the basis of the next lower level test.

3. If, after the grading of the test at the end of the instruction period, any amounts shall be payable to the Company as provided in A above, the total amount so determined shall be paid by the District to the Company within ten (10) days of the receipt of such computations from the Company and certification by a mutually agreed upon third party evaluation specialist, less any amounts paid by the District under Article I, but, in no event shall such total amount exceed the sum of \$164,000.00.
4. In addition to all other payments, the District agrees to pay according to the following schedule and pursuant to the following conditions:
 - a. If the District shall fail to supply students to the Company as set out in Article II, the District shall pay an amount equal to the payment based upon the mean Grade Level Increase per day per student to be computed at the end of the 180 day period as set out in Article V, Section A, Paragraph 3 to the Company for each such student for every school day which the District failed to supply such student, not including five school days allotted herein to the District for the supplying of such student.
 - b. If any student fails to attend the classes of CMEP for a total in excess of ten (10) days during the course of the 180 day school year, the District shall pay the Company an amount equal to one-half (1/2) of the mean rate payment based upon the mean Grade Level Increase per day per student to be computed at the end of the 180 day period, as set out in Article V, Section A, Paragraph 3, for each such student per each day in excess of the ten (10) days which he failed to attend the classes.
 - c. In no event shall the payments under this paragraph, when added to the payments under Section A of this Article, exceed \$164,000.00.
- B. Administration of pre- and post-tests shall be the responsibility of the District; only the District, the Company or a mutually agreed third party shall test or supervise the giving of such tests.

- C. It is agreed that neither the District nor the Company will be liable for loss, damage, detention or delay, resulting from causes beyond their reasonable control.
- D. In the event this Agreement cannot be performed because of strikes, lockouts, acts of God or any other cause not the fault of the Company, the District shall pay to the Company the sums of sixty-seven cents (\$.67) per student unit per day for each day that the Company did perform under this Agreement.

IN WITNESS WHEREOF, the parties have set their hands the day and year above written.

GRAND RAPIDS PUBLIC SCHOOLS

COMBINED MOTIVATION EDUCATION
SYSTEMS, INC.

By: _____

By: _____

GRAND RAPIDS-ALPHA CONTRACT

SUBCONTRACT BETWEEN GRAND RAPIDS SCHOOL DISTRICT
AND ALPHA LEARNING SYSTEMS COMPANY

EFFECTIVE DATE July 27, 1970

1.00 GENERAL CONDITIONS

1.01 Definitions

Contractor--school district

Subcontractor--education company selected by Office
of Economic Opportunity

Contracting Officer--Office of Economic Opportunity
Contracting Officer

Project Manager--Office of Economic Opportunity
representative

Project Director--contractor's representative

Project Administrator--subcontractor's representative

Management Support Group--Education Turnkey Systems, Inc.

Testing and Analysis Contractor--to be selected by
Office of Economic Opportunity

1.02 Statement of Work--General

Contractor has entered into an agreement with the Office of
Economic Opportunity to participate in a nationwide test of
the effect of performance incentives on remedial education
among disadvantaged children. Contractor recognizes its duty
to improve the reading and mathematics skills of elementary

and junior high school students who are now below standard. Subcontractor has developed an innovative instructional approach in teaching those needed skills.

Statement of Work--Specific

Subcontractor shall conduct an instructional program (hereafter referred to as an Accelerated Learning Achievement Center) for 100 students in each of grades 1, 2, 3, 7, 8 and 9. The project shall continue for the full 1970-71 academic year, consisting of approximately 180 class hours of instruction in each of reading and math. Management support will be provided to Contractor, and the entire project will be evaluated. Subcontractor guarantees a minimum level of results in terms of student achievement; to be held accountable for those results; and to accept payment conditional upon final results.

1.03 Period of Contractual Obligation

The period of contractual performance of this agreement extends from the effective date of this agreement to June 30, 1971.

1.04 Relationships of Office of Economic Opportunity to the Subcontract.

The terms and conditions of contract number BIC-5217 between the Office of Economic Opportunity and Contractor are incorporated herein by reference and made a part hereof. This subcontract is subject to prior written approval of the Contracting Officer for the Office of Economic Opportunity. Contractor is responsible to the Office of Economic Opportunity for the performance of its subcontractor. Any disputes of fact arising under this subcontract, as raised by either party hereto, shall be submitted to the Contracting Officer, whose decision shall be binding.

1.05 Termination

Subcontractor agrees that continuing performance under the subcontract is subject to funding of the prime contract between Contractor and the Office of Economic Opportunity. In the event that for any reason funding ceases during the period of contractual obligation of this subcontract or if the prime

contract is terminated for the Government's convenience, contractor shall be legally authorized by virtue of the provisions contained herein to terminate the subcontract immediately and request the project manager within five days to administer post-tests in reading skills and arithmetic and all such testing shall be completed within ten days thereafter.

Under no conditions or circumstances shall liability to the Contractor as a result of termination exceed the total subcontract price based upon the terms stipulated in par. 3.02--grade level increase and 3.03 interim performance objective tests for the purpose of establishing the final subcontract price within limits of par. 3.04--final price, less any payments theretofore earned by subcontractor pursuant to this subcontract.

In the event that the subcontract is terminated within 60 days of the first day of classroom instruction in the ALAC, the contractor shall be liable in accordance with the termination clause contained in its contract with the OEO for actual, reasonable, necessary and allocable costs incurred for performance of terminated work, including reimbursable costs of settlement for accounting, legal, clerical and other expenses necessary for preparation of settlement claims together with reasonable transportation and other costs in connection with the protection of property allocable to this subcontract. The subcontractor recovery shall be restricted to actual costs only.

Any determination of costs under the preceding paragraph shall be governed by the principles for consideration of costs set forth in Subpart 1.15.2 of the FPR (42 C.F.R. § 1-15.2) as in effect on the date of this subcontract.

In the event that a teacher or other strike in the schools in which the work is to be conducted prohibits the subcontractor's performance for a period of 30 days or more or if the subcontractor can not carry out the program for 30 days or more due to an Act of God, the contractor has the option either to 1) terminate the subcontract; or 2) grant an extension of the

period of performance for a reasonable period for the accomplishment of the work; or 3) enter into re-negotiations with the subcontractor covering such matters as the formula for the incentive, and the period of performance.

When termination is based upon the reasons contained in the immediately preceding paragraph, the contractor shall attempt to post-test all students enrolled in the program. Where 60% of the students presently enrolled are post-tested, the subcontractor shall be paid on a pro rata basis pursuant to the provisions of paras. 2.02, 2.03 and 2.04. Where 60% of the students are not post-tested and the contractor and TAC are satisfied that the contractor exerted its most reasonable and best efforts to post-test the students, the subcontractor shall be paid on the basis of actual costs as if the termination occurred within the first 60 days of the commencement of classroom instruction.

Except as hereinabove provided, termination by the contractor shall limit the liability of the contractor to a unit price(s) pro rata basis based upon post-tests administered after the date of termination.

Unless otherwise provided under this subcontract, the subcontractor from the effective date of termination and for a period of three years after final settlement under this subcontract shall preserve and make available to the Government at all reasonable times at the office of the subcontractor but without direct Charge to the Government, all his books, records, documents, and other evidence bearing on costs and expenses under this subcontract and relating to terminated work.

1.06 Successors and Assigns

All terms, conditions, and provisions hereof shall inure to and shall bind the parties hereto and each of their successors and assigns. Subcontractor shall not assign or transfer its interest, responsibility, or claims payable under this subcontract without prior written consent of the Contracting Officer.

2.00 SPECIFIC PROVISIONS

2.01 Duties of Contractor

Contractor agrees to hire a full-time professional as Project Director who shall be the Superintendent's representative.

Contractor agrees to provide adequate secretarial and clerical staff support, and to provide 10 classrooms for the Accelerated Learning Achievement Center. Project Director may authorize the subcontractor to obtain modifications to classroom facilities in total amount not to exceed \$3200. In such cases, subcontractor shall first provide specifications for such modifications to the Project Director.

Contractor agrees to maintain an information exchange involving teachers, counselors, consultants, and parents. Contractor shall host visitors to the program on a schedule and in accordance with procedures approved by the Project Manager which do not interfere with the operations of the Accelerated Learning Achievement Center.

Contractor agrees to be responsible for ensuring that any student enrolled in the Accelerated Learning Achievement Center and attending school on a given day will attend the Accelerated Learning Achievement Center program, and shall arrange scheduling of classes, where appropriate, to facilitate student attendance.

Contractor agrees to make replacement students available whenever they are needed.

2.02 Duties of Subcontractor

Subcontractor agrees to organize and operate the Accelerated Learning Achievement Center, providing instruction in basic reading and mathematics to students selected for participation.

Subcontractor certifies that the instructional system, materials, and equipment to be used in the project are the same as, or do substantially duplicate, those listed or otherwise identified in response to OEO RFP PRE/E 70-107. Subcontractor further

certifies that the instructional system, materials, and equipment being used, the use of which is being charged through the contractor to the Federal Government, were not developed or financed under previous Government contracts or grants such that they would be available to the Government in substantially similar form without charge. In the event that any such instructional system, materials, and equipment have been developed or financed under a previous Government contract or grant, the Subcontractor shall disclose within 20 days of the effective date of this subcontract, through the Contractor to the Office of Economic Opportunity, the Federal document which financed or developed such items, the extent of modification of such items both as to substantive content, testing validation, and breakdown of costs related thereto.

If, during the contract period, subcontractor wishes to change the instructional system, materials, or equipment used, it must notify Project Director and Project Manager of any substantial changes. Upon their concurrence, such change may be instituted, provided, however, if there is a reduction in cost, the parties will promptly negotiate a reduction in incentive price. The negotiated price shall be subject to the approval of the Contracting Officer.

In no event shall Contractor be liable for a change to more costly instructional system, materials, and equipment.

Subcontractor shall maintain records to reflect all actual start-up and operating costs in accordance with reporting forms and procedures, and at specified intervals required by Project Director, as established by the Management Support Group and approved by the Project Manager. Subcontractor agrees to supply promptly all data and other information required by the Project Director for the reporting system and for other uses.

Subcontractor agrees to provide a full-time professional employee on-site during working hours to provide services specified herein. Subcontractor further agrees to maintain the

level of effort of personnel and equipment required on-site over the full contract period to assure the maximum possible educational development for each student, but in any event no less than the level established by the Project Manager. Any major revision in the level of effort from the level estimated in subcontractor's proposal to the Office of Economic Opportunity must be approved by the Project Manager. If such revision is agreed to and substantially reduces Subcontractor's cost, Contractor and Subcontractor shall promptly negotiate a reduction in the incentive price. The negotiated price is subject to the approval of the Contracting Officer. In no event shall Contractor be liable for a higher cost.

Subcontractor agrees to maintain and service all equipment used in the project and to immediately replace equipment not repaired within 7 work days. If Subcontractor has proprietary rights over any instructional equipment, it further agrees to expend a reasonable amount of effort in training local personnel employed by Contractor in the maintenance and servicing of said equipment, upon request of Contractor.

Subcontractor agrees to train or orient management staff selected by Contractor and Management Support Group in the use of management techniques and approaches involved in Subcontractor's instructional system.

Subcontractor agrees to submit in writing to the Management Support Group and the Project Director, for their use in monitoring the overall project, a management plan with specific task assignments, activities, and planning charts not later than fifteen (15) days after the beginning of instruction. Subcontractor agrees to make available all internal planning and operational documents related directly to the instructional operation of the project.

Subcontractor shall have the Accelerated Learning Achievement Center in operation of the first full day of classroom instruction in the school district for grades 7, 8, 9 September 3, 1970 and for grades 1, 2, 3 September 4, 1970.

2.03 Use of Local Personnel

Subcontractor agrees to the requirements made by Contractor on the employment, training, certification, payment, and use of local personnel, as detailed in Appendix B, attached to this subcontract and made a part thereof.

2.04 Selection and Attendance of Students

All students who are potential participants in this program will have grade level deficiencies in reading and mathematics as determined by any one of three nationally normed, standardized commercially available achievement tests to be selected and administered by the Office of Economic Opportunity or its designee; and will be from poverty area schools. Participants will come from grades 1, 2, 3, 7, 8 and 9 or their equivalent, for a total of 600 students, approximately 100 students per grade. Students will be selected for participation by random assignment by the Office of Economic Opportunity's designee from a target population pool of 150 students per grade. Contractor shall obtain written parental consent for students to be placed in the project. Students to be considered for control purposes will also be randomly assigned from that pool. No student shall be placed in the pool who would not be eligible and accepted for instruction in Contractor's regular classes.

During the first twenty (20) days in which a student participates in the Accelerated Learning Achievement Center, that student shall receive diagnostic testing by the Subcontractor to determine individual treatment. If during that twenty (20) day period, Subcontractor disagrees that the student is qualified to participate because of emotional or mental reasons unrelated to standardized test results, he may request the student's removal in writing to the Project Manager. Upon the Project Manager's determination, an individual test will be administered by a qualified psychologist in consultation with the Testing and Analysis Contractor. In all cases, the Project Manager's decision on student participation shall be final

and binding. Those students remaining after the twenty (20) day period shall remain in the program for the full number of class days normally scheduled for the school for all students. Any student who does not remain shall be the subject of inquiry and certification by the Testing and Analysis Contractor, and the reasons for students leaving the program shall be a subject in the evaluation report.

For the purpose of this subcontract, and more particularly paragraph 3.05 below, the following are the only bona fide reasons for a student leaving the program: absence for a continuous period of 15 days or for intermittent periods totaling 20 days in any three-month period; and/or if parents request removal. In all these cases, Subcontractor shall give written statement from the parent, and the validity of the stated cause shall be certified by the Testing and Analysis Contractor.

Subcontractor shall daily furnish the names of any absent students, and Contractor shall use the same efforts and procedures as are used for all other students in the school district to ensure attendance at make-up and at future sessions. If the student transfers to another school in the district, Contractor shall track that student and facilitate his continued attendance in the Accelerated Learning Achievement Center. If regular school schedules are changed, Contractor agrees to ensure that time will be available for the selected students to continue to participate.

A student's attendance in the program shall be subject to normal school disciplinary procedures, up to suspension or expulsion from classes of 10 continuous or 15 intermittent days in a three-month period. At that point he may be treated as a dropout as outlined earlier in 2.04, re: bona fide reasons for a student leaving the program. Subcontractor may request contractor to initiate disciplinary action in accordance with normal school procedures based on student behavior in the ALAC.

Student participants who reach legal age to voluntarily discontinue their regular school attendance may do so, and may be permitted to continue in the program. Where Contractor has a General Equivalency Diploma program, the student may receive credit toward that diploma by his participation in the project. The performance of such a student shall continue to be the subject of payment to Subcontractor but will not be used for final evaluation purposes.

Wherever possible, students who leave the program for any reason shall be post-tested for evaluation purposes by the testing and Analysis Contractor, as more specifically set forth in Clause 2.05. Contractor and Subcontractor shall use their best efforts to obtain such post-tests, particularly by notifying the Testing and Analysis Contractor upon learning that a student may be leaving the program.

When a vacancy occurs, it shall be certified by the Project Director. A replacement who can be scheduled into the Subcontracted program will be randomly selected from the target population by the Testing and Analysis Contractor within 3 days and placed in the program by the Contractor within 3 days. No replacements shall be made later than thirty (30) days before the end of the project. If the pool needs to be increased, students will be selected for inclusion on the same basis as students were originally selected. Final decision on replacements rests with the Project Manager.

Any transportation required to facilitate attendance of students in the Accelerated Learning Achievement Center shall be provided by Contractor, with expenses borne by it.

2.05 Testing

Entry and exit level of each student participant will be determined by scores on any one of three nationally normed standardized, commercially available achievement tests administered at the beginning and end of the 1970-71 academic year by the Office of Economic Opportunity or its designee. Office of Economic

Opportunity in conjunction with the Project Director shall supervise these and the interim performance test. Such tests will be the basis for determining student achievement gains and subcontractor reimbursement. No information whatsoever shall in any way be disclosed to subcontractor as to what test or what forms of the test have been or will be used, except for that information which the project manager makes available to all other subcontractors. Project Manager shall have the right to test with any instrument that he deems appropriate for his own management requirements a sample of participants at any time after participants have received a minimum of twenty (20) hours of instruction in either reading or mathematics. Such testing shall not interfere with the subcontractor's instructional time. A sample number of participants shall be tested four (4) months after completion of instruction to determine rates of retention. Said tests shall not be administered earlier than two weeks after the first day of classes for school year 1971-72. Results of the retention test will be used for Office of Economic Opportunity evaluation purposes.

Subcontractor has the right to administer any tests that are part of his program for the diagnosis and placement of students or for Subcontractor's internal program assessment.

Tests and testing procedures for project evaluation and for Subcontractor payment purposes or both shall be under the authority of OEO or its designee.

Testing of student progress under the authority of OEO or its designee shall be as follows:

- 2.05. 1. The procedures for determining the pre-test, post-test, net gain scores per individual student shall be as follows:
 - a. OEO with the advice of the Management Support Contractor and the testing and Analysis Contractor shall jointly select three (3) commercially available, nationally normed, standardized reading and arithmetic tests and/or subtests.

- b. Not more than ten (10) days after the contractor's first day of classes, OEO or designee shall administer the three tests, all forms, one test per student, to the appropriate grade levels. Subcontractor shall not be told, nor shall he attempt to determine in any manner whatsoever what test or what form of what test any student received. Subcontractor shall be informed by the Project Manager ten (10) days prior to the pre-test of the level of the test to be used for each grade level involved in the project, and all other information referred to in paragraph 2.05 above.
- c. No earlier than ten (10) days prior to the contractor's last full day of classes, June 4, 1971 (unless otherwise approved by the Project Manager) OEO or its designee shall administer the post-test to each student. The post-test shall be a different form of the same test that was administered to the student as the pre-test. Prior to the post-testing, the subcontractor shall not be told, nor shall he attempt to determine in any manner whatsoever what test or what form of what test any student shall receive. No later than thirty (30) days prior to the scheduled post-test, the subcontractor shall notify in writing the testing and analysis contractor, stipulating and justifying the test level it wishes to be utilized for each student or groups of students participating in the project.
- d. TAC will make recommendations to the Project Manager regarding the appropriate test levels to be used. The Project Manager will determine the test levels to be used.
- e. OEO or its designee shall have the authority over the pre and post testing conditions to ensure that such conditions are as comparable as is possible, including makeup examinations. Exceptions to comparability of

pre and post test conditions shall be investigated by the Testing and Analysis Contractor and reported to the OEO with recommendations. The OEO shall then make a determination which shall be binding upon both parties of this sub-contract.

- 2.05 2. The procedures for assessing student achievement on subcontractor's interim performance objectives shall be as follows:
- a. The assessment of student performance on the subcontractor's interim performance objectives shall take place within 7 days of the following dates:
 - Interim Assessment #1 October 16, 1970
 - Interim Assessment #2 November 25, 1970
 - Interim Assessment #3 January 15, 1971
 - Interim Assessment #4 February 26, 1971
 - Interim Assessment #5 April 16, 1971
 - b. No later than August 25, 1970, Subcontractor shall submit to the Test and Analysis Contractor the instruments it proposes to use for each Interim Assessment, #1 through #5. Subcontractor shall indicate the objectives to be assessed and the relationship of the objectives to the Subcontractor's curriculum. Furthermore, the Subcontractor shall submit an item pool, to consist of no less than three (3) times the number of items the Contractor deems necessary for the assessment of each objective. The proposed instrument must be designed by the Subcontractor so that one hundred (100) percent of the students will correctly answer and/or perform seventy-five (75) percent of the items.
 - c. The Test and Analysis Contractor shall certify to the OEO that the objectives to be assessed are a fair measure of the Subcontractor's curriculum and that the items are a fair measure of the objectives.
 - d. If the Test and Analysis Contractor is not satisfied with the Subcontractor's 100-75 performance levels,

the objectives, or the number and relevance of the items, it shall stipulate in writing to the OEO and the Subcontractor the reasons for its dissatisfaction, with recommendations for improvement.

- e. OEO, with the assistance of the Project Director, shall then negotiate such conditions and their remedy with the Subcontractor. The subsequent OEO findings and actions will be final and binding upon the Subcontractor and shall not be subject to disputes.
- f. If the Test and Analysis Contractor is satisfied with the objectives and the items, it shall randomly sample items from the item pools to build the final instrument.
- g. The OEO or its designated representative shall administer the interim assessment tests. The Subcontractor shall see the instruments used no sooner than the day they are to be administered.

- 2.05. B. Only the Office of Economic Opportunity shall authorize the release of any test results to the public. In all cases, they shall be group scores and not individual scores. Neither Contractor, Subcontractor, Management Support Group, Testing and Analysis Contractor, or any of their employees or consultants shall release test results or cause them to be made public in any way without written permission of the Project Manager, Office of Economic Opportunity.

2.06 Penalty for Teaching Test Items

The Testing and Analysis Contractor will perform a pre-audit of the Subcontractor's instructional program prior to but not later than October 1, 1970, to determine that standardized test items are not included in the curriculum. The Project Manager, through the T.A.C., reserves the right to conduct continuing audits of the curriculum to insure that standardized post-test items are not included.

The test question item pool procedure and the use of a variety of standardized tests is intended to prevent affirmative influencing of student performance on standardized, norm referenced tests by foreknowledge of questions to be asked, commonly called "teaching to tests". Suspicion that such an event has been attempted or accomplished shall be stated in writing to the Office of Economic Opportunity and communicated immediately by telephone to the Management Support Group. Representatives of the Office of Economic Opportunity or its designees shall immediately visit the project site and determine the validity of the charge, the number of participants affected, and whether any damage was caused. The Office of Economic Opportunity shall have the authority to terminate the project for cause at that point and to require the Subcontractor to return all funds paid him by the Contractor.

2.07 Liability

Contractor shall owe the same duty of care and responsibility to student participants in Subcontractor's instructional components, whether operated during or after regular school hours, as it does to those same students when in regular classroom situations. Any additional insurance premiums necessitated shall be borne by Contractor. Contractor shall assume liability for any damage, personal or property, occurring out of the transporting of students to or from Subcontractor operated facilities.

Subcontractor shall assume liability for its employees and for any accident occurring on premises under its control. Subcontractor is responsible for equipment and other property maintained on Contractor's premises and shall insure against loss or damage thereto. Where Subcontractor property or material is kept on premises under Contractor control, Subcontractor may require a reasonable improvement of security measures.

Subcontractor agrees to purchase within five days of the effective date of this subcontract a performance bond in the maximum

amount of the subcontract, reflecting an insurable interest in both the Contractor and the Office of Economic Opportunity. The performance bond shall immediately be submitted to the Contracting Officer for his approval.

Subcontractor shall in no way be considered an agent of the Contractor or the Federal Government. The Subcontractor shall indemnify and hold harmless the Contractor and the Federal Government from any or all acts or omissions of the Subcontractor, its agents or employees, arising in any manner under this subcontract.

2.08 Student Rights

Recent decisions in a variety of jurisdictions including the Supreme Court have established student constitutional rights as against school districts, their agents, and administrative and instructional personnel. Subcontractor shall assume that the same constitutional prohibitions apply to it. Subcontractor and Contractor actions in regard to all student participants, particularly in the event of expulsion from the program, must meet constitutional requirements, especially those of procedural and substantive due process.

2.09 Copyrights and Patents

Paragraphs 40 and 41 of Clause XIII--General Provisions of the prime contract between the Office of Economic Opportunity and Contractor are included herein by reference.

3.00 Payment Provisions

3.01 Fixed Price Incentive Clause

The performance incentive measurement for establishing interim and final subcontract price shall be based on the results of pre- and post-test gains as measured by standardized tests established in each subject and interim performance tests after completion of each period of approximately six weeks or 30 hours of instruction in each subject.

3.02 GRADE LEVEL INCREASE MEASURED BY NATIONAL STANDARDIZED TESTS

"Seventy five percent of the total unit price of this subcontract is based upon grade level achievement increase above the minimum guarantee of 0.75 grade gain in grades 1-3 and 1.00 grade gain in grades 7-9 in accordance with the schedule below:

Grade Gains	Price per gain level above minimum guarantee	
	Price (Grades 1-3)	Price (Grades 7-9)
.75- .99	\$ 56.25	\$.00
1.00-1.24	75.00	75.00
1.25-1.49	93.75	93.75
1.50-1.75	112.50	112.50
1.75-1.99	120.00	120.00
2.00-2.49	127.50	127.50
2.50-2.99	135.00	135.00
3.00-3.99	142.50	142.50
4.00 and over	150.00	150.00

3.03 INTERIM PERFORMANCE OBJECTIVE MEASUREMENT TEST

In addition, the subcontractor shall receive one-fourth of the total unit price or \$37.50 per student in each subject based on each student's satisfactory completion of the predetermined proficiency of 75% level in the five interim performance tests. The unit price for each student for satisfactory completion in each subject of each interim performance objective test is \$7.50. The student interim performance objective standard level tests approved by the evaluation contractor shall be final and binding on both parties.

3.04 Final Price

The average fixed maximum unit price based on gains in achievement level and interim performance objective tests shall not exceed \$300.00 per student for both subjects based on a maximum of 360 instructional hours for the school year. The total maximum incentive price for this subcontract for both subjects shall not exceed \$180,000.00

3.05 Student Drop Out Unit Price

(a) If any student drops out or otherwise leaves the program through no fault of the Subcontractor and for reasons beyond its control as more fully detailed in Paragraph 2.04

and obtains less than 30 hours of instruction per subject, the basis for establishing unit prices shall be the following:

On a percentage of attendance time of the student dropout to total instructional time based on the mean average of the total incentive price payments for students remaining in the whole program divided by the number of these students, for each grade level.

(b) Every student dropout from the ALAC program who was in the program for at least 30 hours of instruction per subject and remains in attendance in the school district shall be post-tested and the basis for establishing unit prices shall be the following:

1. A rate of \$6.50 for each 0.1 grade level gain increase provided the student meets the minimum guarantee requirement on a pro rata basis, and
2. \$7.50 for each interim performance objective test, that the student attains a 75% level of satisfactory completion or better.
3. In addition the subcontractor shall receive for the ensuing IPO test that the student dropout is not in attendance, a fraction of one IPO payment based on the time the dropout is in attendance after taking his last IPO test to a total of 30 hours of instruction in each subject. One IPO test payment X Dropout hours in attendance after last IPO test. 30 HOURS

3.06 Student Replacement Unit Price

The basis for establishing unit prices for the replacement students shall be as follows:

- (1) \$6.50 for each 0.1 grade level increase in each subject based on pre-test/post-test gains, provided the student meets the minimum guarantee requirement under this subcontract on a pro rata basis, and

- (2) \$7.50 for each interim performance objective test taken, that the student attains a 75% level of satisfactory completion or better.
- (3) In addition, if the replacement does not take the first IPO test, the subcontractor shall receive a fraction of one IPO payment based on the time from the date the replacement enters the ALAC program to the date of the first IPO test in attendance divided by a total of 30 hours of instruction time in each subject. e.g. One IPO payment X Replacement Student hours in attendance to the First IPO test.

3.07 Limitation of Payment

Notwithstanding any other provision of this subcontract, the subcontractor shall receive interim provisional payments equivalent to 80% of the estimated total maximum price. This 80% interim provisional payment shall be separated into seven installment payments as follows:

1st payment--a lump sum of \$21,000 for submission by the subcontractor of the interim performance objective tests to the testing and analysis contractor.

2nd payment--a lump sum of \$21,000 for attendance of a minimum of 50% of target student population at each grade level as certified by the T.A.C.

3rd through

7th payment--\$35 for student, after evidence of administration of each interim performance objective test in both subjects to each student in attendance as certified by the prime contractor's school project director.

Within 45 days after the final post-measure test results are established and reported by the evaluation contractor to the subcontractor, the subcontractor shall submit an adjusted final voucher with detailed supporting information for each unit price for each subject for each student enrolled in the program and total additional amounts that may be due in both subjects. Any amount of the total provisional payments in excess of the final determined total price based upon student performance on interim and final tests shall be reimbursed by

the subcontractor through the prime contractor to the Government.

- 3.07 "Students Not Tested: If a student is unable to take any regularly scheduled test that is a basis for subcontractor reimbursement or regularly scheduled make-up tests, and if said student has been in attendance at the Accelerated Learning Achievement Center no less than eighty-five (85) percent of the time for the instructional period being evaluated, it shall be assumed that said student's score is the same as the average test of gain score, whichever is appropriate, for all students in that Accelerated Learning Achievement Center of the same grade level as said students".

4.00 SUBCONTRACT APPROVAL

This subcontract shall not be effective until approved in writing by the Contracting Officer. The date of such approval shall constitute the effective date of this subcontract.

5.00 SPECIAL PROVISION

It is understood by the parties hereto that the subcontractor shall be bound by the following clauses found in the prime contract number BIC-5217, Clause XIII--General provisions: 5, 7, 13, 21, 22, 23, 24, 36, 37, 39, 40, 41, and 44. Wherever in the prime contract the word "Government" appears, the word "Contractor" should be substituted therefore, and wherever the word "Contractor" appears the word "Subcontractor" should be substituted therefor.

- 5.00 Add "13" to General Provisions clauses subcontractor is bound by. Add new sentence "Subcontractor's response to OEO RFP PRE/E 70-107 is incorporated in this subcontract by reference."

signed:

C. R. Muth
Acting Superintendent of Schools
Grand Rapids Public Schools

Alpha Learning Systems, Inc.